

10/005, 294

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status
data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
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NEWS WWW CAS World Wide Web Site (general information)

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 16:52:37 ON 19 APR 2005

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY SESSION
0.21 0.21

FILE 'REGISTRY' ENTERED AT 16:52:48 ON 19 APR 2005
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STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5
DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

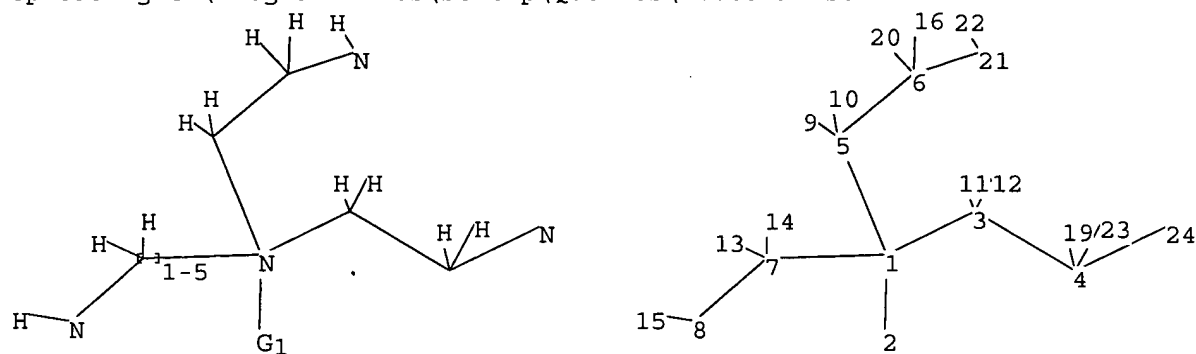
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24
chain bonds :
1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22
exact/norm bonds :
1-2 1-3 1-5 1-7 4-24 6-21 7-8
exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

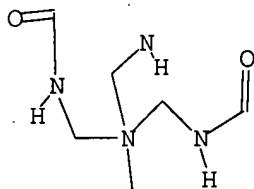
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L1 STRUCTURE UPLOADED

=> d query

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 16:54:58 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 4 TO ITERATE

100.0% PROCESSED 4 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 4 TO 200
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 16:55:01 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 63 TO ITERATE

100.0% PROCESSED 63 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
162.62	162.83

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 16:55:04 ON 19 APR 2005
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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

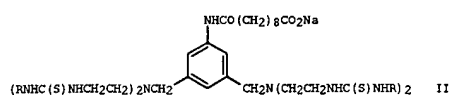
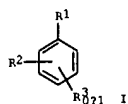
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 1 L3

=> d l4 abs ibib hitstr



AB The title compds. [I; R₁ = R₂, R₃, NHCO(CH₂)₈COONa, etc.; R₂, R₃ = N-disubstituted CH₂NH₂ (wherein NH₂ is substituted by a group consisting of paramagnetic metal-ion chelators and nitroxides), etc.] such as compound II [R = 4-C₆H₄CH₂CH(COO⁻)N(CH₂COO⁻)CH₂CH₂N(CH₂COO⁻)₂Gd³⁺.2Na⁺], which increased contrast enhancement of a MR anglog. when injected to adult rat, were prepared In each derivative I, termed an amplifier because the dendritic structure on each mol. terminates with multiple termini to each of which an active group can be attached, the desired effect of the active group per mol is amplified compared to conventional compds. having only one active group per mol. Amplifier mols. can include a targeting group permitting the mols. to preferentially attach to a particular anatomical or physiol. situs. Active groups are any of various pharmacol. or therapeutically active moieties, including moieties useful for magnetic-resonance contrast enhancement.

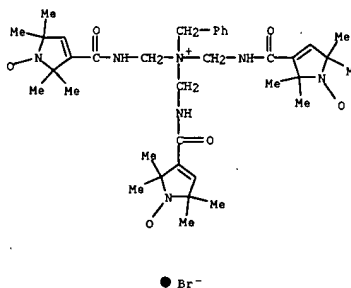
ACCESSION NUMBER: 1996:679495 CAPLUS
DOCUMENT NUMBER: 126:31177
TITLE: Preparation of dendritic amplifier molecules having multiple terminal active groups stemming from a benzyl core group as MRI contrast agents
INVENTOR(S): Keana, John F. W.; Martin, Vladimir; Ralston, William H.
PATENT ASSIGNEE(S): State of Oregon Acting by and Through the State Board of Higher Education, USA
SOURCE: U.S., 58 pp., Cont.-in-part of U.S. 5,412,148.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5567411	A	19961022	US 1994-316787	19940929
US 4863717	A	19890905	US 1986-928943	19861110
US 5135737	A	19920804	US 1989-403595	19890905
US 5252317	A	19931012	US 1992-887542	19920522
AU 9224041	A1	19940303	AU 1992-24041	19920804
US 5412148	A	19950502	US 1993-133652	19931006

US 1986-928943 A2 19861110
US 1989-403595 A3 19890905
US 1992-887542 A3 19920522
US 1993-133652 A2 19931006
WO 1992-US6490 W 19920804

OTHER SOURCE(S): MARPAT 126:31177

IT 184177-46-6P
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of dendritic amplifier mols. having multiple terminal active groups stemming from a benzyl core group as MRI contrast agents)
RN 184177-46-6 CAPLUS
CN 1H-Pyrrol-1-yloxy, 3,3',3''-[[[(phenylmethyl)nitri]o]tris(methyleneiminocarbonyl)]tris(2,5-dihydro-2,2,5,5-tetramethyl-, bromide (9CI) (CA INDEX NAME)



=> fil reg
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE ENTRY	TOTAL SESSION
5.39	168.22

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE ENTRY	TOTAL SESSION
-0.73	-0.73

FILE 'REGISTRY' ENTERED AT 16:55:56 ON 19 APR 2005
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STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5
DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

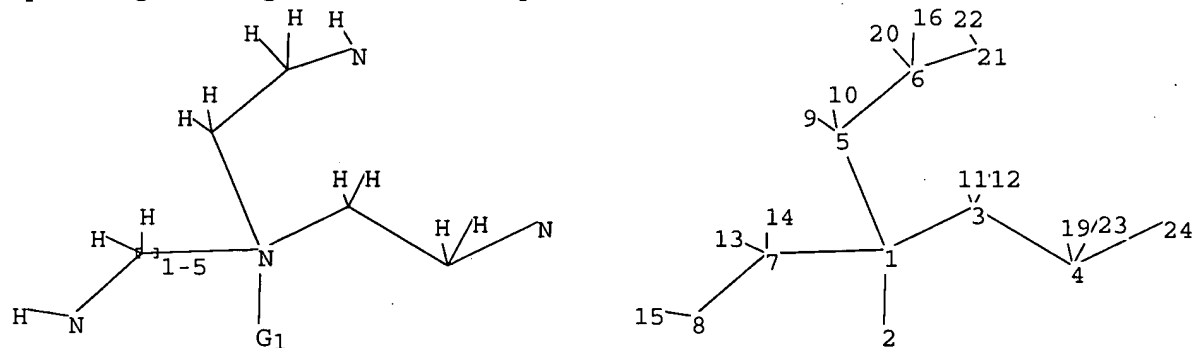
Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
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* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>
Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24
 chain bonds :
 1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
 exact bonds :
 3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

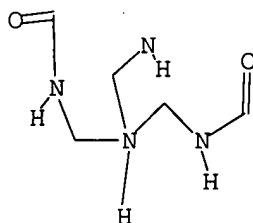
G1:C,H

Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L5 STRUCTURE UPLOADED

=> d query

L5 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 16:56:10 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 32 TO ITERATE

100.0% PROCESSED 32 ITERATIONS
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**

PROJECTED ITERATIONS: 301 TO 979
 PROJECTED ANSWERS: 0 TO 0

L6 0 SEA SSS SAM L5

=> s 15 full

FULL SEARCH INITIATED 16:56:15 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 881 TO ITERATE

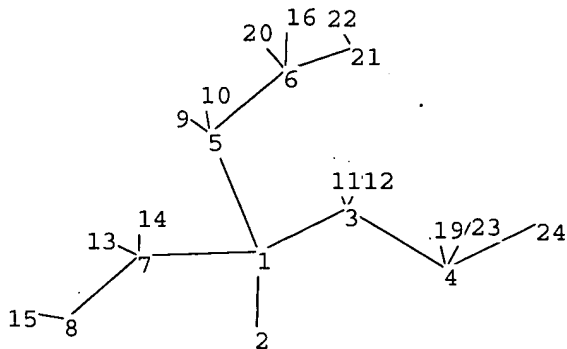
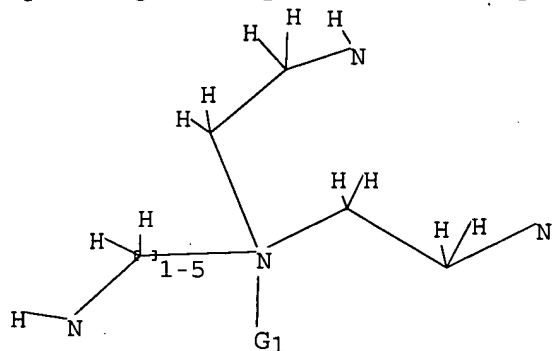
100.0% PROCESSED 881 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L7 0 SEA SSS FUL L5

=>

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chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

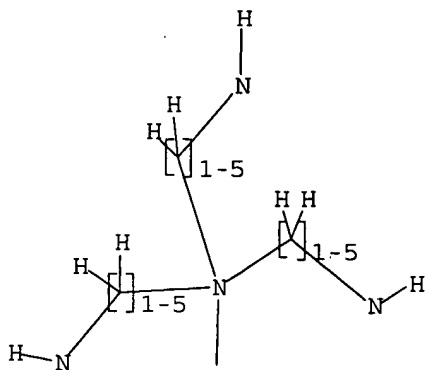
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L8 STRUCTURE UPLOADED

=> d query

L8 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l8

SAMPLE SEARCH INITIATED 16:58:42 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 109818 TO ITERATE

0.9% PROCESSED 1000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

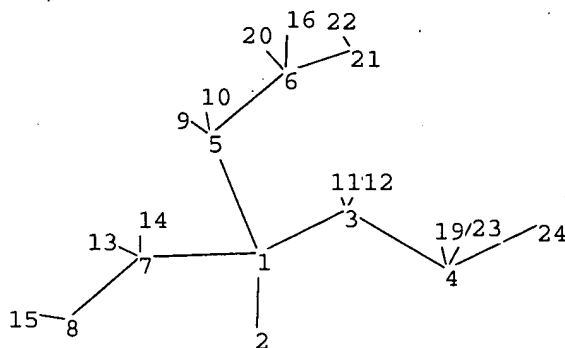
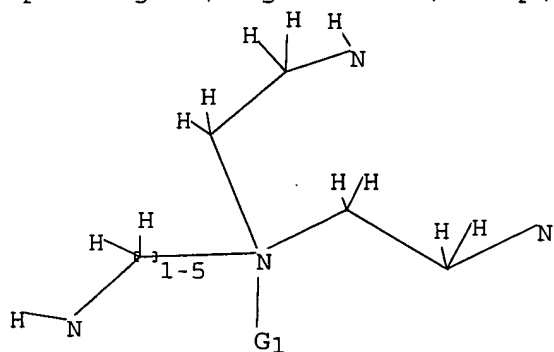
FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **INCOMPLETE**

PROJECTED ITERATIONS: EXCEEDS 1000000
PROJECTED ANSWERS: EXCEEDS 0

L9 0 SEA SSS SAM L8

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

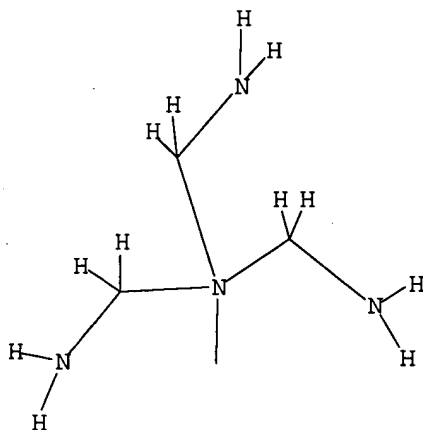
Match level :

```
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS
```

L10 STRUCTURE UPLOADED

=> d query

L10 STR



Structure attributes must be viewed using STN Express query preparation.

=> S 110

SAMPLE SEARCH INITIATED 17:00:10 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 4 TO ITERATE

```
100.0% PROCESSED      4 ITERATIONS      0 ANSWERS
SEARCH TIME: 00.00.01
```

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

```

PROJECTED ITERATIONS:      4 TO      200
PROJECTED ANSWERS:         0 TO        0

```

L11 . 0 SEA SSS SAM L10

=> s 110 full

FULL SEARCH INITIATED 17:00:14 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 63 TO ITERATE

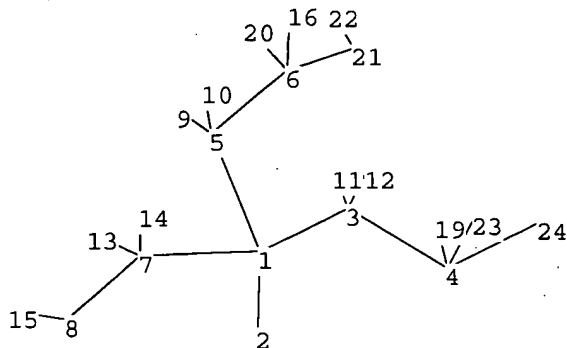
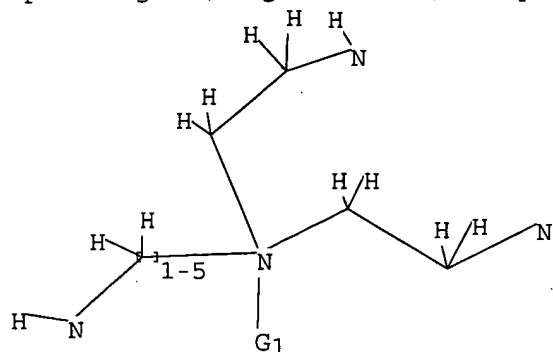
100.0% PROCESSED 63 ITERATIONS
 SEARCH TIME: 00.00.01

0 ANSWERS

L12 0 SEA SSS FUL L10

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

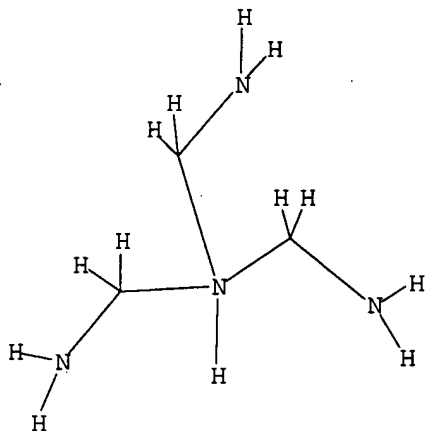
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L13 STRUCTURE UPLOADED

=> d query

L13 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l13

SAMPLE SEARCH INITIATED 17:00:48 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 85 TO ITERATE

100.0% PROCESSED 85 ITERATIONS
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**

PROJECTED ITERATIONS: 1147 TO 2253
 PROJECTED ANSWERS: 0 TO 0

L14 0 SEA SSS SAM L13

=> s l13 full

FULL SEARCH INITIATED 17:00:54 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 1896 TO ITERATE

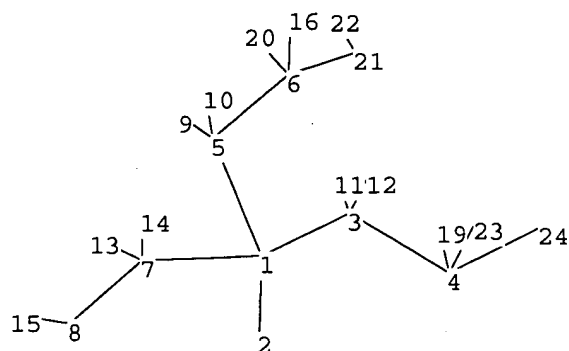
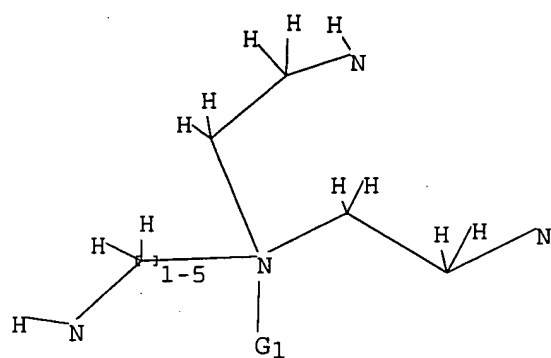
100.0% PROCESSED 1896 ITERATIONS
 SEARCH TIME: 00.00.01

0 ANSWERS

L15 0 SEA SSS FUL L13

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

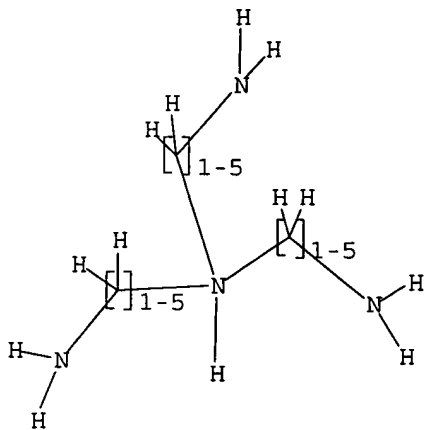
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L16 STRUCTURE UPLOADED

=> d query

L16 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l16

SAMPLE SEARCH INITIATED 17:01:48 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 127784 TO ITERATE

0.8% PROCESSED 1000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **INCOMPLETE**
PROJECTED ITERATIONS: EXCEEDS 1000000
PROJECTED ANSWERS: EXCEEDS 0

L17 0 SEA SSS SAM L16

=> s l16 full

FULL SEARCH INITIATED 17:01:53 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - >1,000,000 TO ITERATE

< 15.7% PROCESSED 400000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.09

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **INCOMPLETE**
PROJECTED ITERATIONS: EXCEEDS 1000000
PROJECTED ANSWERS: EXCEEDS 0

L18 0 SEA SSS FUL L16

=> logoffy

LOGOFFY IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> logoff y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	648.33	816.55
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

STN INTERNATIONAL LOGOFF AT 17:02:45 ON 19 APR 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1204BXD

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status
data from INPADOC
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NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

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agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 17:14:17 ON 19 APR 2005

=>

Uploading

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Do you want to switch to the Registry File?

Choice (Y/n):

Switching to the Registry File...

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> FILE REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 17:15:00 ON 19 APR 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

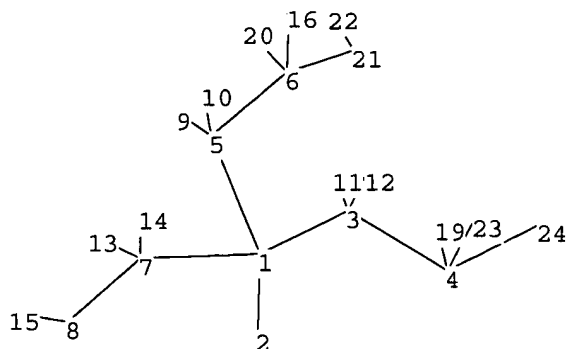
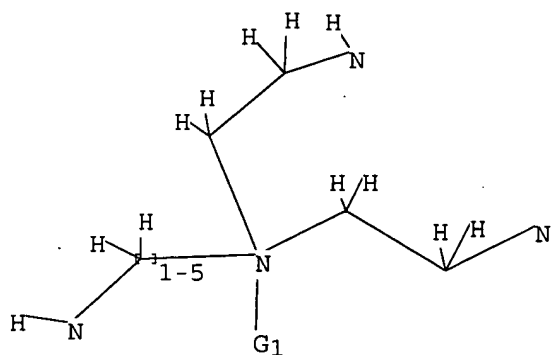
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

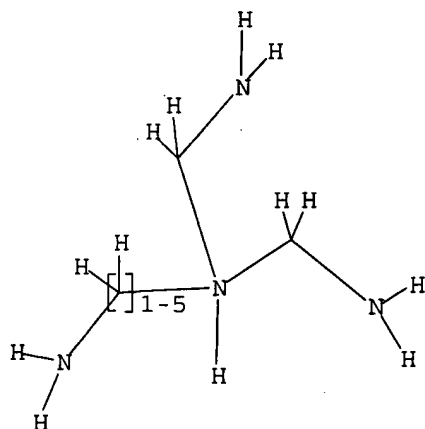
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L1 STRUCTURE UPLOADED

=> d query

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 17:15:27 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 184 TO ITERATE

100.0% PROCESSED 184 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 2867 TO 4493
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 17:15:31 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3973 TO ITERATE

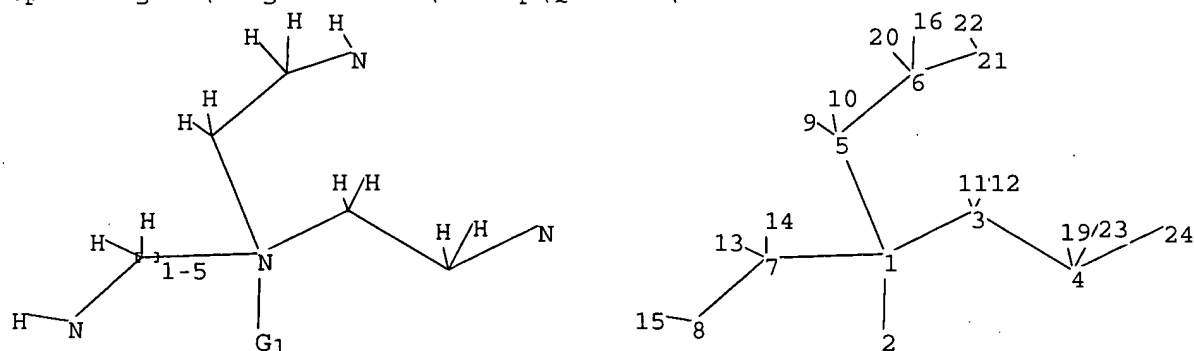
100.0% PROCESSED 3973 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L3 0 SEA SSS FUL L1

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

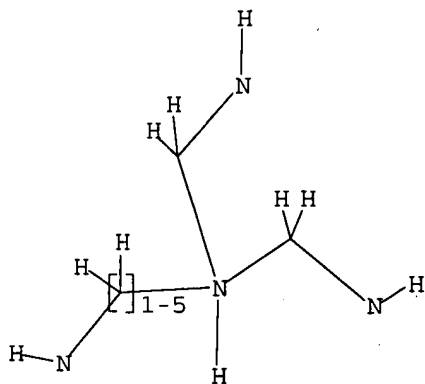
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L4 STRUCTURE UPLOADED

=> d query

L4 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l4

SAMPLE SEARCH INITIATED 17:16:02 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 184 TO ITERATE

100.0% PROCESSED 184 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**

PROJECTED ITERATIONS: 2867 TO 4493
PROJECTED ANSWERS: 0 TO 0

L5 0 SEA SSS SAM L4

=> s l4 full

FULL SEARCH INITIATED 17:16:06 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3973 TO ITERATE

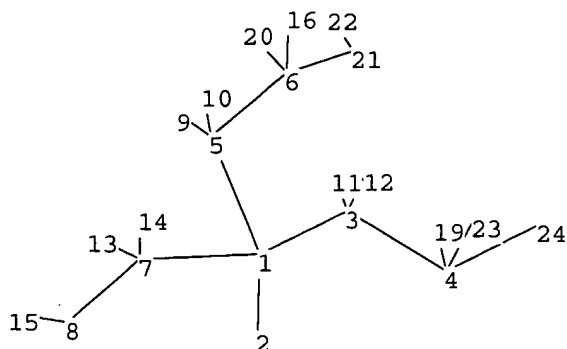
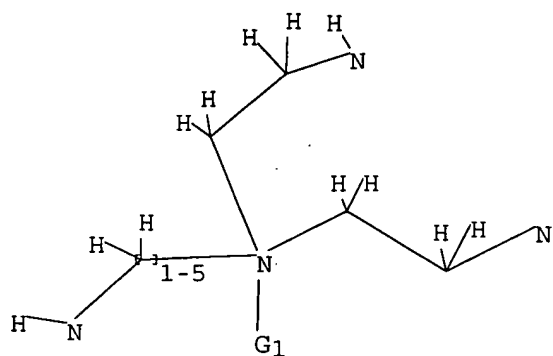
100.0% PROCESSED 3973 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L6 0 SEA SSS FUL L4

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

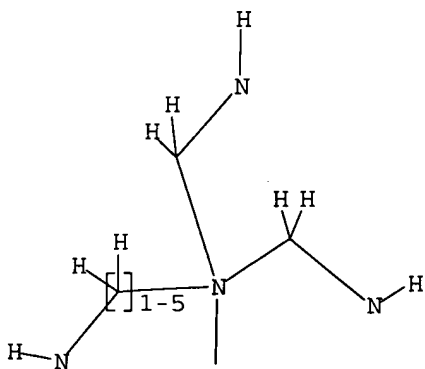
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L7 STRUCTURE UPLOADED

=> d query

L7 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 17
SAMPLE SEARCH INITIATED 17:16:41 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 6 TO ITERATE

100.0% PROCESSED 6 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 6 TO 266
PROJECTED ANSWERS: 0 TO 0

L8 0 SEA SSS SAM L7

=> s 17 full
FULL SEARCH INITIATED 17:16:45 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 100 TO ITERATE

100.0% PROCESSED 100 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

L9 2 SEA SSS FUL L7

=> fil caplus			
COST IN U.S. DOLLARS	SINCE FILE	TOTAL	
	ENTRY	SESSION	
FULL ESTIMATED COST	483.99	484.20	

FILE 'CAPLUS' ENTERED AT 17:16:49 ON 19 APR 2005
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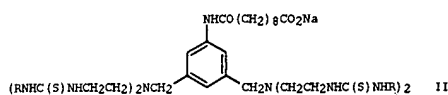
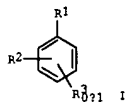
FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 19
L10 1 L9

=> d l10 abs ibib hitstr



AB The title compds. [I; R1 = R2, R3, NHCO(CH2)8COONa, etc.; R2, R3 = N-disubstituted CH2NH2 (wherein NH2 is substituted by a group consisting of paramagnetic metal-ion chelators and nitroxides), etc.] such as compound II [R = 4-C6H4CH2CH(COO-)N(CH2COO-)CH2CH2N(CH2COO-)CH2CH2N(CH2COO-)2.Gd+.2Na+], which increased contrast enhancement of a MR angiog. when injected to adult rat, were prepared. In each derivative I, termed an amplifier because the dendritic structure on each mol. terminates with multiple termini to each of which an active group can be attached, the desired effect of the active group per mol is amplified compared to conventional compds. having only one active group per mol. Amplifier mols. can include a targeting group permitting the mols. to preferentially attach to a particular anatomical or physiol. situs. Active groups are any of various pharmacol. or therapeutically active moieties, including moieties useful for magnetic-resonance contrast enhancement.

ACCESSION NUMBER: 1996:679495 CAPLUS

DOCUMENT NUMBER: 126:31177

TITLE: Preparation of dendritic amplifier molecules having multiple terminal active groups stemming from a benzyl core group as MRI contrast agents
Keana, John F. W.; Martin, Vladimir; Ralston, William H.

PATENT ASSIGNEE(S): State of Oregon Acting by and Through the State Board of Higher Education, USA

SOURCE: U.S., 58 pp., Cont.-in-part of U.S. 5,412,148.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5567411	A	19961022	US 1994-316787	19940929
US 4863717	A	19890905	US 1986-928943	19861110
US 5135737	A	19920804	US 1989-403595	19890905
US 5252317	A	19931012	US 1992-887542	19920522
AU 9224041	A1	19940303	AU 1992-24041	19920804
US 5412148	A	19950502	US 1993-133652	19931006

US 1986-928943	A2	19861110
US 1989-403595	A3	19890905
US 1992-887542	A3	19920522
US 1993-133652	A2	19931006
WO 1992-056490	W	19920804

OTHER SOURCE(S): MARPAT 126:31177

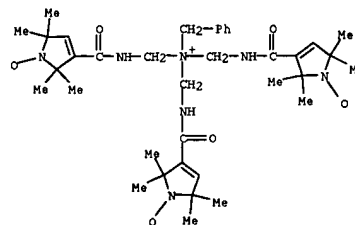
IT 184177-46-6P

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of dendritic amplifier mols. having multiple terminal active groups stemming from a benzyl core group as MRI contrast agents)

RN 184177-46-6 CAPLUS

CN 1H-Pyrrol-1-yl-oxo, 3,3',3''-[[[(phenylmethyl)nitrido]tris(methyleneiminocarbonyl)]tris[2,5-dihydro-2,2,5,5-tetramethyl-, bromide (SCI) (CA INDEX NAME)



● Br⁻

=> fil reg
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE ENTRY	TOTAL SESSION
5.39	489.59

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE ENTRY	TOTAL SESSION
-0.73	-0.73

FILE 'REGISTRY' ENTERED AT 17:17:06 ON 19 APR 2005
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STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

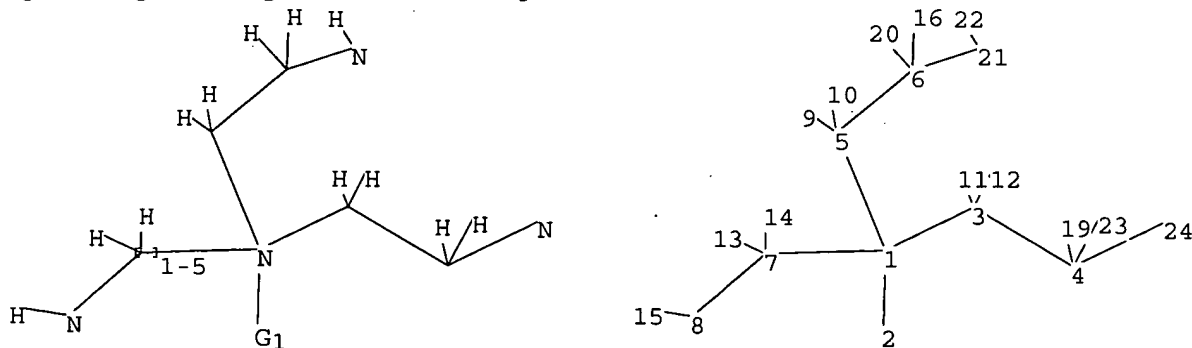
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24
 chain bonds :
 1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
 exact bonds :
 3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

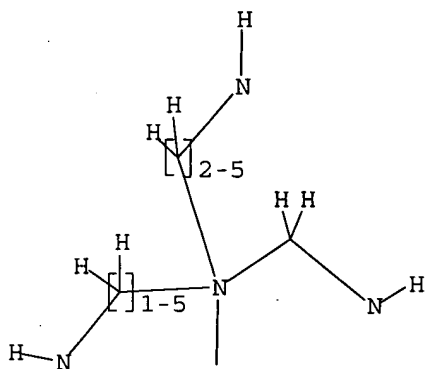
G1:C,H

Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L11 STRUCTURE UPLOADED

=> d query

L11 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l11

SAMPLE SEARCH INITIATED 17:17:58 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 2936 TO ITERATE

34.1% PROCESSED 1000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 55471 TO 61969
 PROJECTED ANSWERS: 0 TO 0

L12 0 SEA SSS SAM L11

=> s l11 full

FULL SEARCH INITIATED 17:18:03 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 57774 TO ITERATE

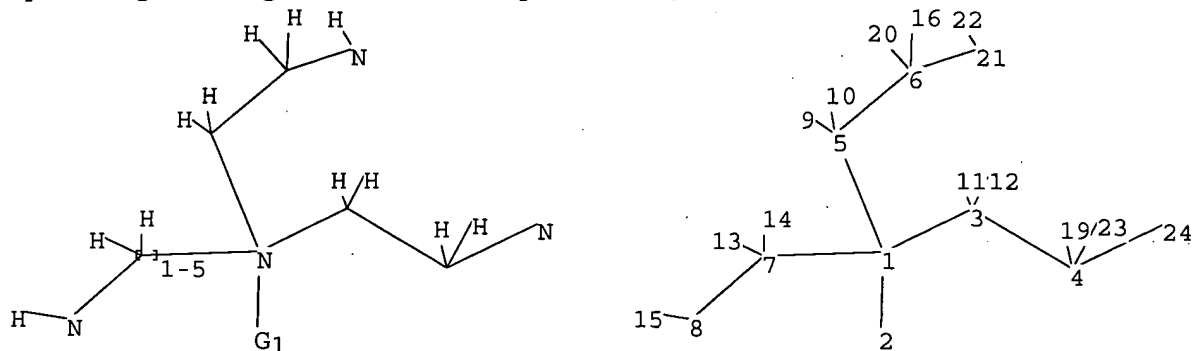
100.0% PROCESSED 57774 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L13 0 SEA SSS FUL L11

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

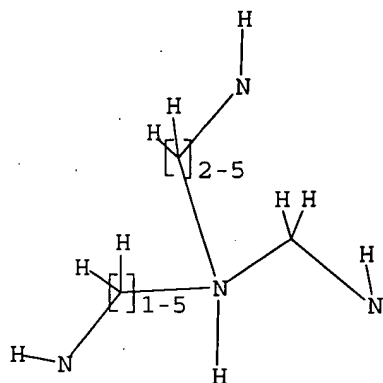
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L14 STRUCTURE UPLOADED

=> d query

L14 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l14

SAMPLE SEARCH INITIATED 17:19:29 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 26254 TO ITERATE

3.8% PROCESSED 1000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 515390 TO 534770
PROJECTED ANSWERS: 0 TO 0

L15 0 SEA SSS SAM L14

=> s l14 full

FULL SEARCH INITIATED 17:19:37 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 520720 TO ITERATE

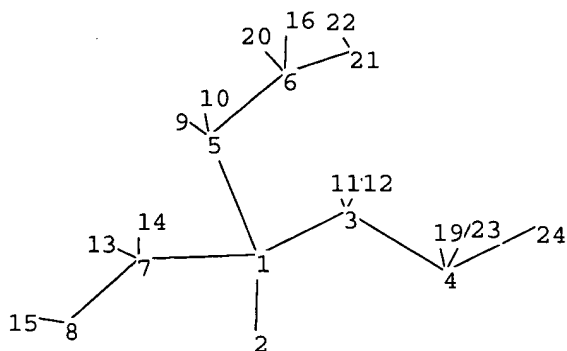
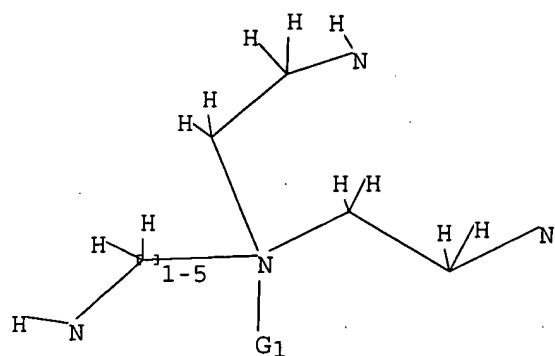
76.8% PROCESSED 400000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.10

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 520720 TO 520720
PROJECTED ANSWERS: 0 TO 0

L16 0 SEA SSS FUL L14

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

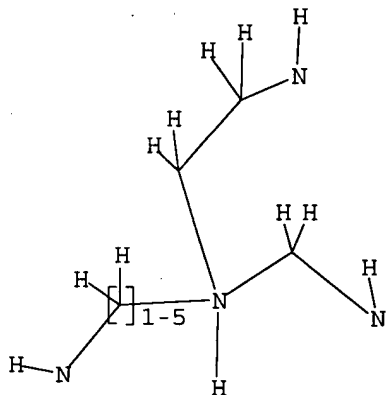
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L17 STRUCTURE UPLOADED

=> d query

L17 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l17

SAMPLE SEARCH INITIATED 17:23:25 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 930 TO ITERATE

100.0% PROCESSED 930 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 16771 TO 20429
PROJECTED ANSWERS: 0 TO 0

L18 0 SEA SSS SAM L17

=> s l17 full

FULL SEARCH INITIATED 17:23:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 18374 TO ITERATE

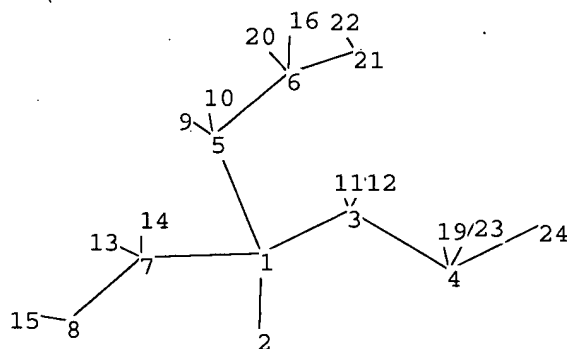
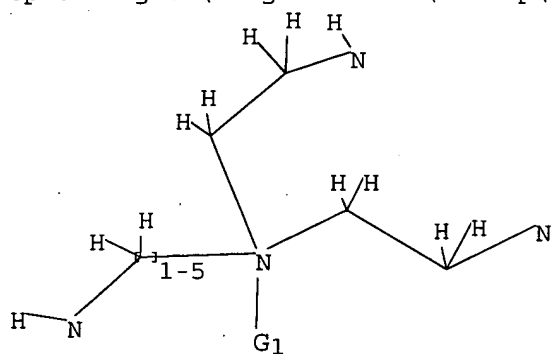
100.0% PROCESSED 18374 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L19 0 SEA SSS FUL L17

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

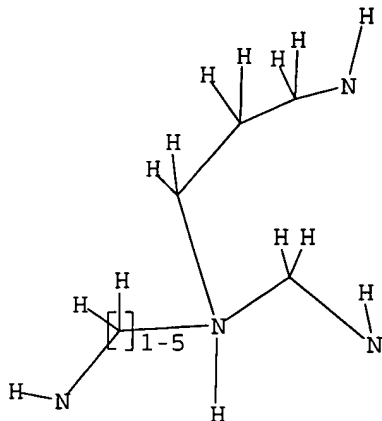
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L20 STRUCTURE UPLOADED

=> d query

L20 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l20

SAMPLE SEARCH INITIATED 17:24:16 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 693 TO ITERATE

100.0% PROCESSED 693 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**

PROJECTED ITERATIONS: 12281 TO 15439
PROJECTED ANSWERS: 0 TO 0

L21 0 SEA SSS SAM L20

=> s l20 full

FULL SEARCH INITIATED 17:24:20 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 13354 TO ITERATE

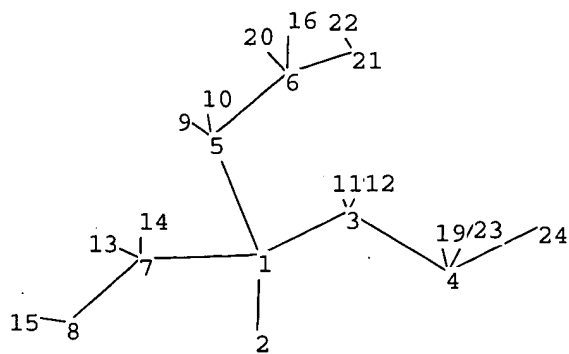
100.0% PROCESSED 13354 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L22 0 SEA SSS FUL L20

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



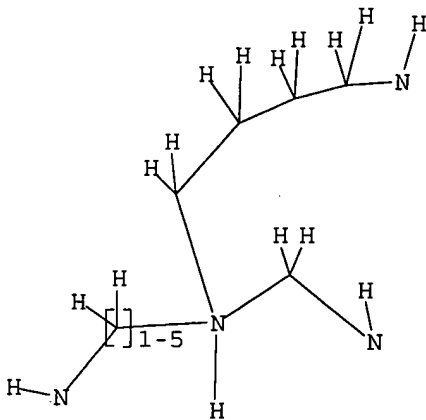
```

1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  19  20  21  22  23  24
chain bonds :
1-2  1-3  1-5  1-7  3-4  3-11  3-12  4-19  4-23  4-24  5-6  5-9  5-10  6-16  6-20
6-21  7-8  7-13  7-14  8-15  21-22
exact/norm bonds :
1-2  1-3  1-5  1-7  4-24  6-21  7-8
exact bonds :
3-4  3-11  3-12  4-19  4-23  5-6  5-9  5-10  6-16  6-20  7-13  7-14  8-15  21-22

```

```
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS
```

L23 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l23 full

FULL SEARCH INITIATED 17:25:12 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 12924 TO ITERATE

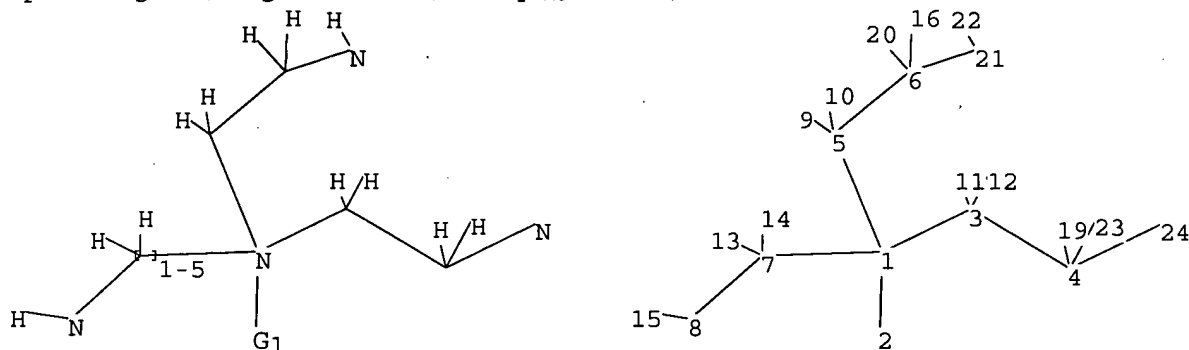
100.0% PROCESSED 12924 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L24 0 SEA SSS FUL L23

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS

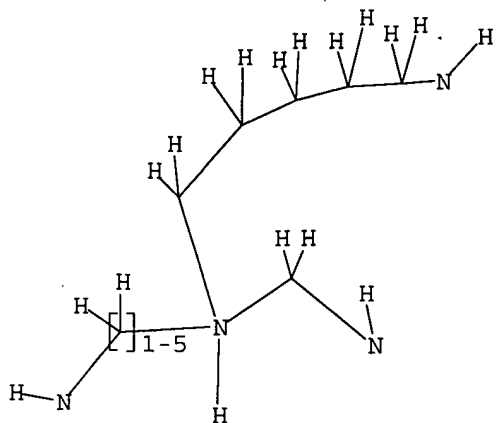
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS

20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L25 STRUCTURE UPLOADED

=> d query

L25 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 125

SAMPLE SEARCH INITIATED 17:25:58 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1186 TO ITERATE

84.3% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 21654 TO 25786
PROJECTED ANSWERS: 0 TO 0

L26 0 SEA SSS SAM L25

=> s 125 full

FULL SEARCH INITIATED 17:26:03 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 23357 TO ITERATE

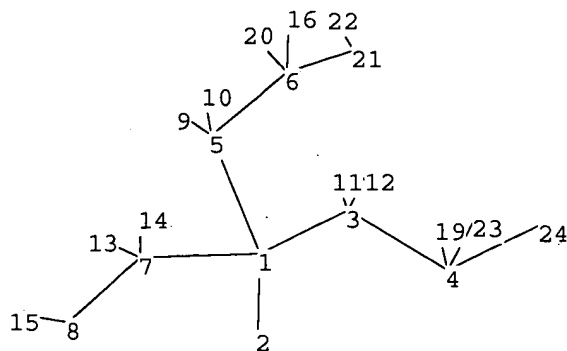
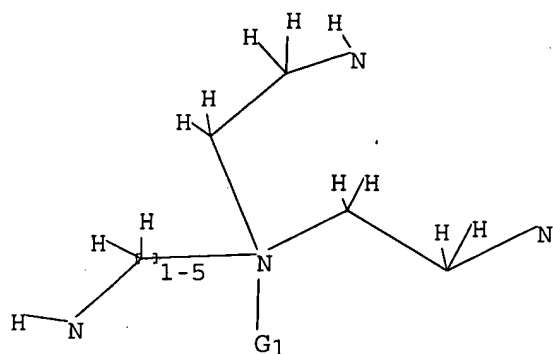
100.0% PROCESSED 23357 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L27 0 SEA SSS FUL L25

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

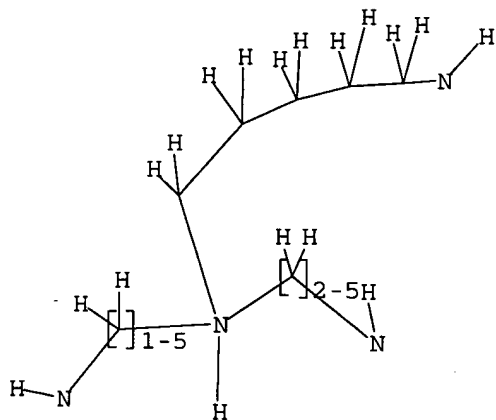
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L28 STRUCTURE UPLOADED

=> d query

L28 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 128

SAMPLE SEARCH INITIATED 17:27:12 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 48043 TO ITERATE

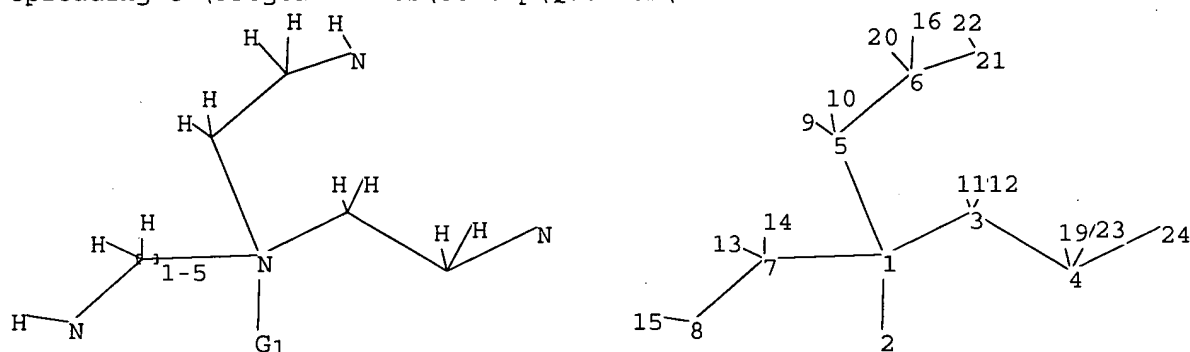
2.1% PROCESSED 1000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **INCOMPLETE**
PROJECTED ITERATIONS: 947786 TO 973934
PROJECTED ANSWERS: 0 TO 0

L29 0 SEA SSS SAM L28

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

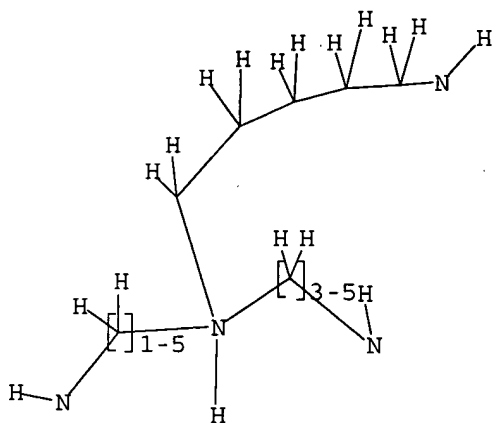
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L30 STRUCTURE UPLOADED

```
=> d queyr
L30 HAS NO ANSWERS
'QUEYR ' IS NOT A VALID STRUCTURE FORMAT KEYWORD
Structure Formats
SIA ----- Structure Image, Attributes, and map table if it contains
              data. (Default)
SIM ----- Structure Image.
SAT ----- Structure ATtributes and map table if it contains data.
SCT ----- Structure Connection Table and map table if it contains
              data.
SDA ----- All Structure DATA (image, attributes, connection table and
              map table if it contains data).
NOS ----- NO Structure data.
ENTER STRUCTURE FORMAT (SIM), NOS:nos
L30          STR
```

```
=> d query
L30          STR
```



Structure attributes must be viewed using STN Express query preparation.

```
=> s l30
SAMPLE SEARCH INITIATED 17:28:05 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 48035 TO ITERATE
```

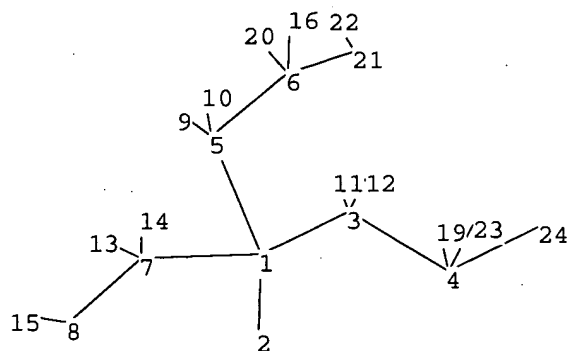
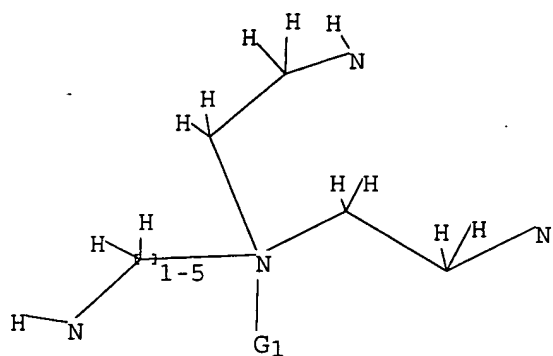
```
2.1% PROCESSED      1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01
```

0 ANSWERS

```
FULL FILE PROJECTIONS:  ONLINE  **INCOMPLETE**
                        BATCH   **INCOMPLETE**
PROJECTED ITERATIONS:   947627 TO 973773
PROJECTED ANSWERS:      0 TO      0
```

```
L31          0 SEA SSS SAM L30
```

```
=>
Uploading C:\Program Files\Stnexp\Queries\10005294.str
```



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

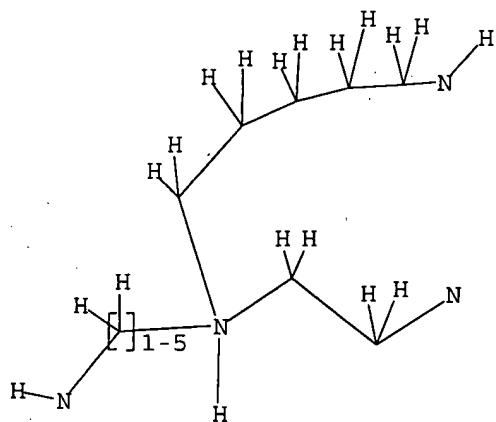
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L32 STRUCTURE UPLOADED

=> d query

L32 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 132

SAMPLE SEARCH INITIATED 17:29:36 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 2541 TO ITERATE

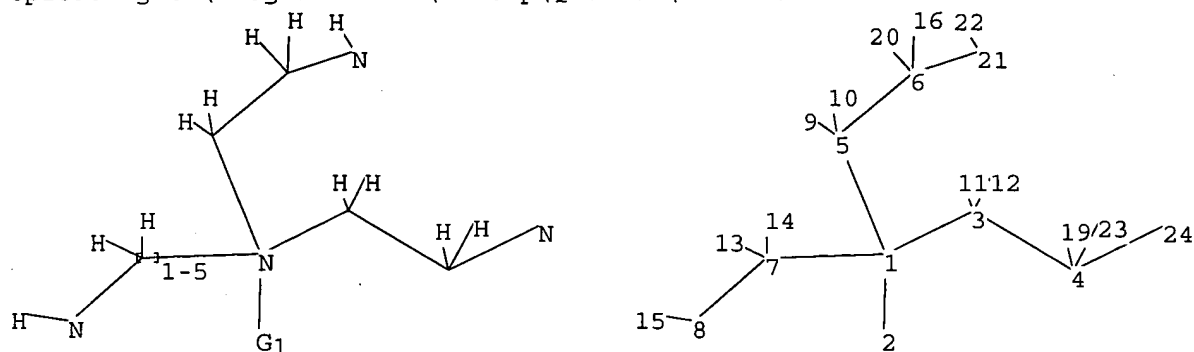
39.4% PROCESSED 1000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 47797 TO 53843
PROJECTED ANSWERS: 0 TO 0

L33 0 SEA SSS SAM L32

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

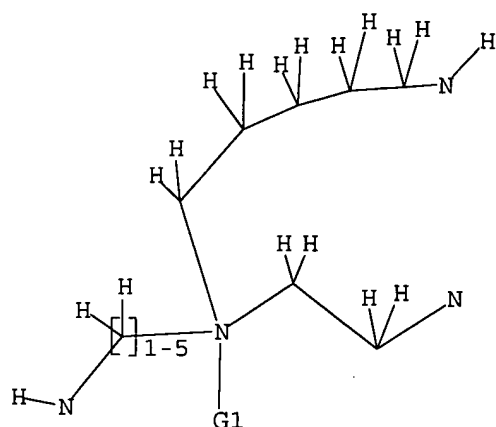
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L34 STRUCTURE UPLOADED

=> d query
L34

STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s l34

SAMPLE SEARCH INITIATED 17:30:21 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 2541 TO ITERATE

39.4% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 47797 TO 53843
PROJECTED ANSWERS: 0 TO 0

L35 0 SEA SSS SAM L34

=> s l34 full

FULL SEARCH INITIATED 17:30:25 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 49370 TO ITERATE

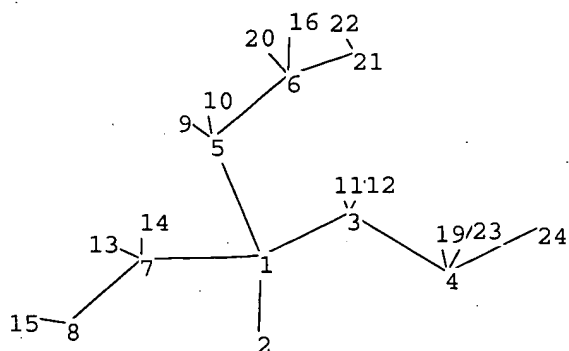
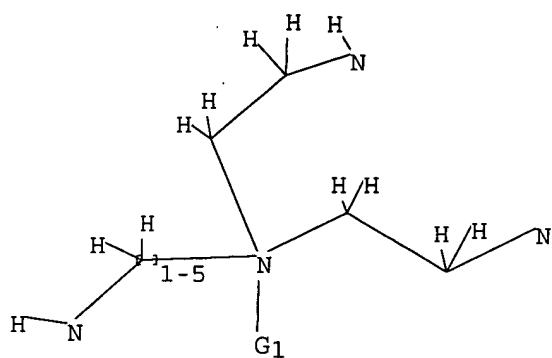
100.0% PROCESSED 49370 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L36 0 SEA SSS FUL L34

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

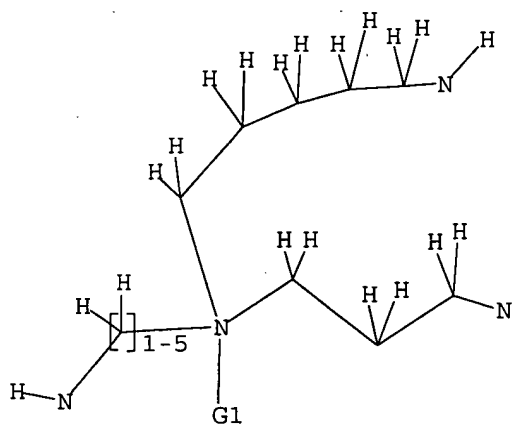
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L37 STRUCTURE UPLOADED

=> d query

L37 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 137

SAMPLE SEARCH INITIATED 17:31:08 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 903 TO ITERATE

100.0% PROCESSED 903 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 16258 TO 19862
PROJECTED ANSWERS: 0 TO 0

L38 0 SEA SSS SAM L37

=> s 137 full

FULL SEARCH INITIATED 17:31:13 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 17754 TO ITERATE

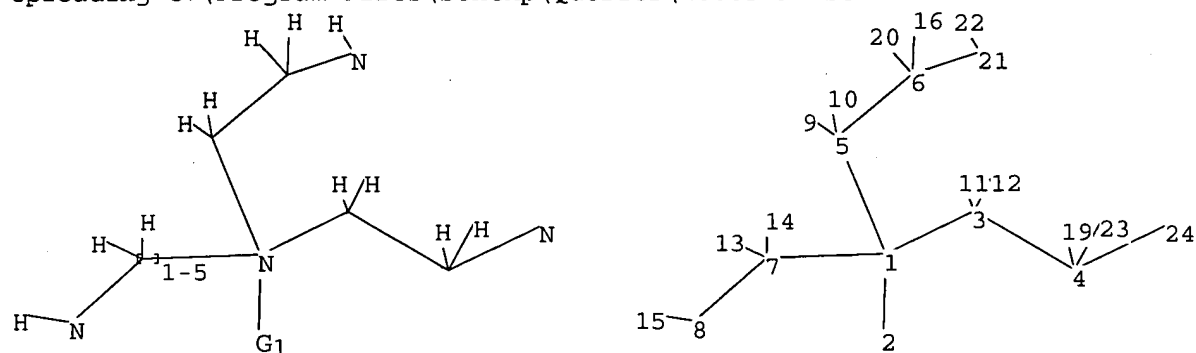
100.0% PROCESSED 17754 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L39 0 SEA SSS FUL L37

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

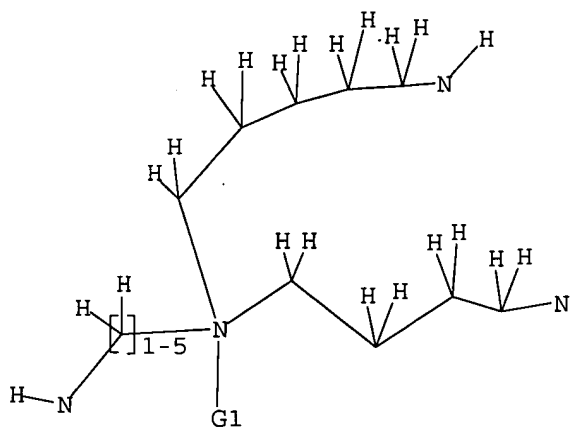
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L40 STRUCTURE UPLOADED

=> d query

L40 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 140

SAMPLE SEARCH INITIATED 17:31:51 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 1262 TO ITERATE

79.2% PROCESSED 1000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 23109 TO 27371
 PROJECTED ANSWERS: 0 TO 0

L41 0 SEA SSS SAM L40

=> s 140 full

FULL SEARCH INITIATED 17:31:55 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 25229 TO ITERATE

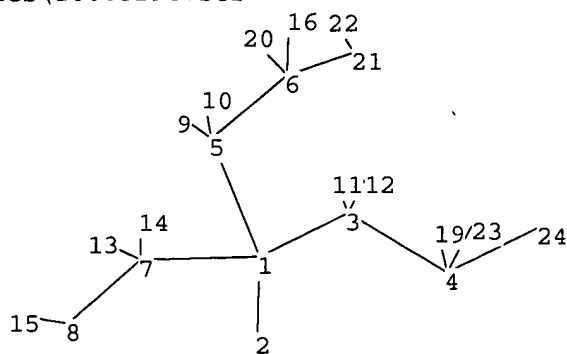
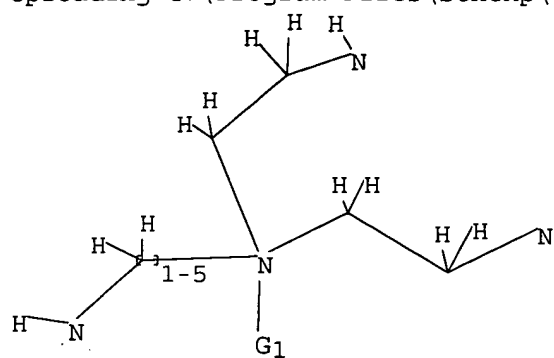
100.0% PROCESSED 25229 ITERATIONS
 SEARCH TIME: 00.00.01

0 ANSWERS

L42 0 SEA SSS FUL L40

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

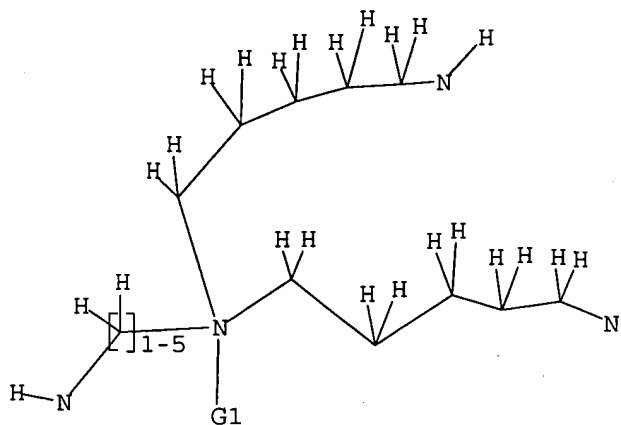
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L43 STRUCTURE UPLOADED

=> d query

L43 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 143

SAMPLE SEARCH INITIATED 17:32:36 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 4138 TO ITERATE

0 ANSWERS

24.2% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 78903 TO 86617
PROJECTED ANSWERS: 0 TO 0

L44 0 SEA SSS SAM L43

=> s 143 full

FULL SEARCH INITIATED 17:32:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 81709 TO ITERATE

2 ANSWERS

100.0% PROCESSED 81709 ITERATIONS
SEARCH TIME: 00.00.01

L45 2 SEA SSS FUL L43

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1620.18	2109.77
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

FILE 'CAPLUS' ENTERED AT 17:32:48 ON 19 APR 2005
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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l45

L46 0 L45

=> fil caold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.45	2110.22
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

FILE 'CAOLD' ENTERED AT 17:32:59 ON 19 APR 2005
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FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

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This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s l45

L47 0 L45

=> fil reg
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.43	2110.65

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-0.73

FILE 'REGISTRY' ENTERED AT 17:33:15 ON 19 APR 2005
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5
DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

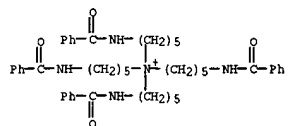
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

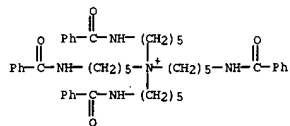
Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d 145 1-2

L45 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 744950-27-4 REGISTRY
 ED Entered STN: 15 Sep 2004
 CN 1-Pentanaminium, 5-(benzoylamino)-N,N,N-tris[5-(benzoylamino)pentyl]-
 (9CI) (CA INDEX NAME)
 MF C48 H64 N5 O4
 CI COM
 SR CA



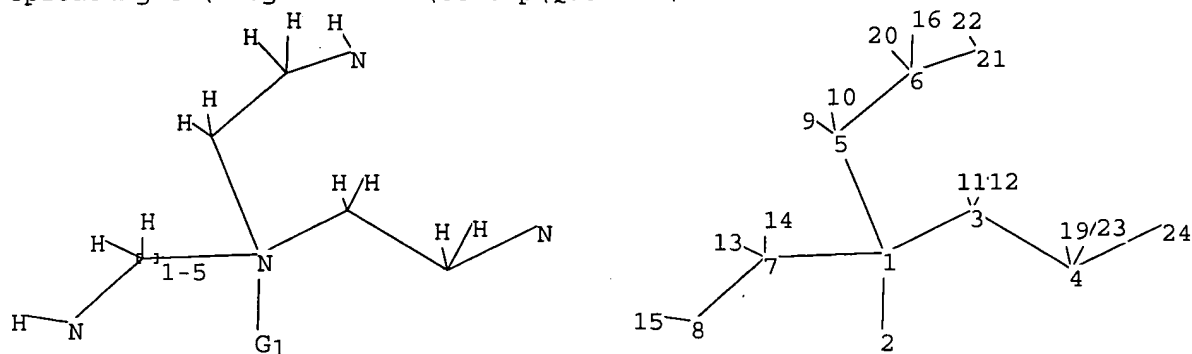
L45 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 6270-95-7 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN 1-Pentanaminium, 5-(benzoylamino)-N,N,N-tris[5-(benzoylamino)pentyl]-,
 chloride (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN NSC 36389
 MF C48 H64 N5 O4 . Cl
 CRN (744950-27-4)



● Cl⁻

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

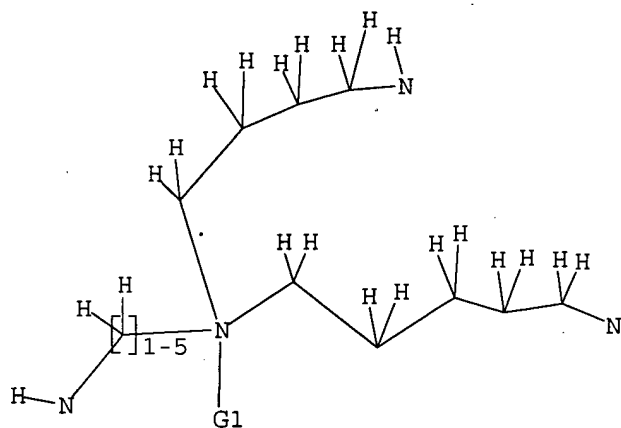
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L48 STRUCTURE UPLOADED

=> d query

L48 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 148

SAMPLE SEARCH INITIATED 17:36:15 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1262 TO ITERATE

79.2% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 23109 TO 27371
PROJECTED ANSWERS: 0 TO 0

L49 0 SEA SSS SAM L48

=> s 148 full

FULL SEARCH INITIATED 17:36:20 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 25229 TO ITERATE

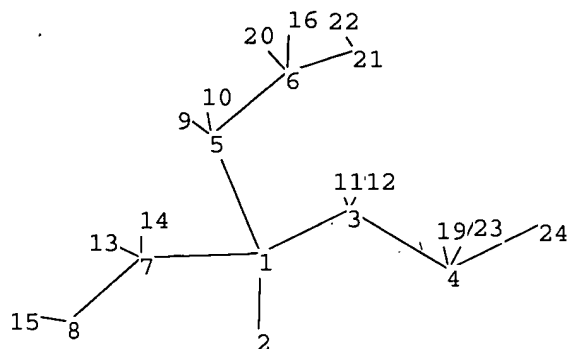
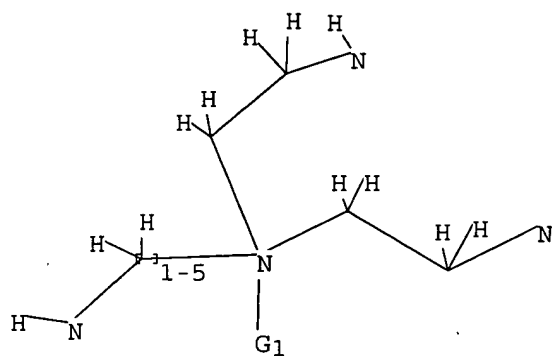
100.0% PROCESSED 25229 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L50 0 SEA SSS FUL L48

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

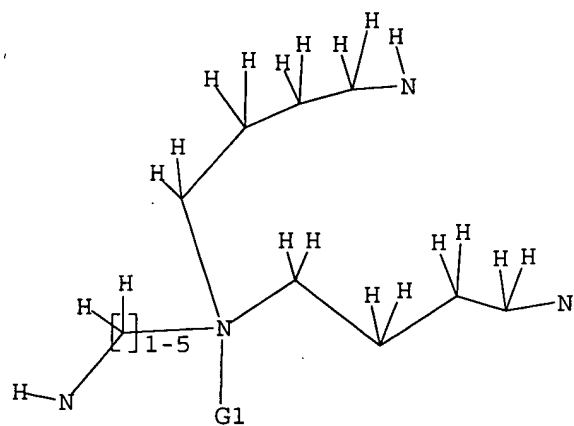
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L51 STRUCTURE UPLOADED

=> d query

L51 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s l51

SAMPLE SEARCH INITIATED 17:37:09 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 2207 TO ITERATE

45.3% PROCESSED 1000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 41323 TO 46957
PROJECTED ANSWERS: 0 TO 0

L52 0 SEA SSS SAM L51

=> s l51 full

FULL SEARCH INITIATED 17:37:14 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 44431 TO ITERATE

100.0% PROCESSED 44431 ITERATIONS 15 ANSWERS
SEARCH TIME: 00.00.03

L53 15 SEA SSS FUL L51

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	328.49	2439.14
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

FILE 'CAPLUS' ENTERED AT 17:37:20 ON 19 APR 2005
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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 152

L54 0 L52

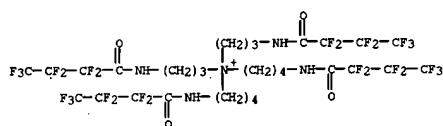
=> s 153

L55 3 L53

=> d 155 1-3 abs ibib hitstr

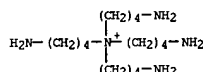
L55 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Using heptafluorobutyl derivs. of 27 linear di-, tri-, tetra-, penta- and hexamines containing various sets of isomers, and 4 tertiary tetraamines and 5 quaternary pentaamines, mostly with 3 or 4 methylene chain units, their gas chromatog. (GC) and gas chromatog.-mass spectrometric (GC-MS) properties were compared and examined. Several results useful for their systematic anal. were found: assured baseline separation of 1 methylene difference in linear di- and polyamines and tertiary tetraamines by GC; distinct pyrolytic decomposition patterns of quaternary pentaamines by GC; distinct cleavage patterns of 3 or 4 methylene chain units by GC-MS; and distinct mass spectra of linear polyamines and tertiary tetraamines by GC-MS.

ACCESSION NUMBER: 1993:551383 CAPLUS
 DOCUMENT NUMBER: 119:151383
 TITLE: Systematic analysis of naturally occurring linear and branched polyamines by gas chromatography and gas chromatography-mass spectrometry
 AUTHOR(S): Niitsu, Masaru; Samejima, Keiji; Matsuzaki, Shigeru; Hamana, Koei
 CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Josai University, 1-1 Keyakidai, Sakado, Saitama, 350-02, Japan
 SOURCE: Journal of Chromatography (1993), 641(1), 115-23
 CODEN: JOCRAM; ISSN: 0021-9673
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 149981-90-8 149981-91-9 149981-92-0
 RL: ANT (Analyte); ANST (Analytical study)
 (gas chromatog. and mass spectrometry of)
 RN 149981-90-8 CAPLUS
 CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N-[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]-N,N-bis[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)

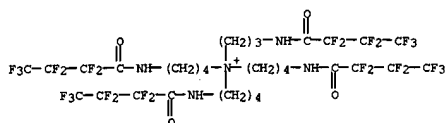


RN 149981-91-9 CAPLUS
 CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N-bis[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]-N-[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)

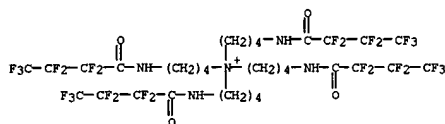
L55 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)



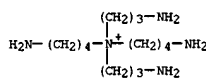
L55 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)



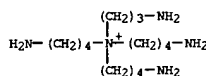
RN 149981-92-0 CAPLUS
 CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N-tris[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]- (9CI) (CA INDEX NAME)



IT 143085-77-2 148275-76-7 148275-81-4
 RL: PRP (Properties); ANST (Analytical study)
 (gas chromatog.-mass spectrometry of, as heptafluorobutyl derivative)
 RN 143085-77-2 CAPLUS
 CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)



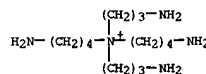
RN 148275-76-7 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 148275-81-4 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(4-aminobutyl)- (9CI) (CA INDEX NAME)

L55 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Tertiary tetraamines and quaternary pentaamines composed of aminopropyl and/or aminobutyl groups were synthesized as authentic samples for the identification of naturally occurring branched polyamines. Four tertiary tetraamines, including [HZN(CH₂)_n]3N.4HCl (n = 3, 4) and [HZN(CH₂)₃]2N(CH₂)4NH₂.HCl, were obtained by alkylating the free secondary amine group of dipthaloyl derivs. of sym-norspermidine or sym-homospermidine with N-(3-bromopropyl)phthalimide or N-(4-bromobutyl)phthalimide in the presence of KF-Celite. Five quaternary pentaamines, e.g., [HZN(CH₂)_n]4N⁺.Cl⁻.4HCl (n = 3, 4), were obtained by fusing triphthaloyl derivs. of the tertiary tetraamines with an excess amount of N-(3-iodopropyl)phthalimide or N-(4-iodobutyl)phthalimide. The present methods are simple and achieved high yields. The ¹³C-NMR spectra of these branched polyamines were recorded in D₂O as fully protonated forms, and all ¹³C chemical shifts were assigned consistently.

ACCESSION NUMBER: 1993:427654 CAPLUS
 DOCUMENT NUMBER: 119:27654
 TITLE: Syntheses of tertiary tetraamines and quaternary pentaamines with three and four methylene chain units
 AUTHOR(S): Niitsu, Masaru; Sano, Hira; Samejima, Keiji
 CORPORATE SOURCE: Fac. Pharm. Sci., Josai Univ., Sakado, 350-02, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1992), 40(11), 2958-61
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 119:27654
 IT 148275-62-1P 148275-63-2P 148275-64-3P
 148275-78-9P 148275-80-3P 148275-83-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 148275-62-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)

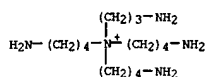


● Cl⁻

● 4 HCl

RN 148275-63-2 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)

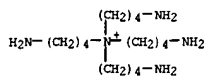
L55 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● C1-

● 4 HCl

RN 148275-64-3 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-tris(4-aminobutyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)



● C1-

● 4 HCl

RN 148275-78-9 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)-, perchlorate, tetraeperchlorate (9CI) (CA INDEX NAME)

CM 1

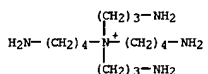
CRN 7601-90-3
CMF C1 H O4



CM 2

CRN 148275-77-8

L55 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 4

CRN 14797-73-0
CMF C1 O4



RN 148275-83-6 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-tris(4-aminobutyl)-, perchlorate, tetraeperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H O4

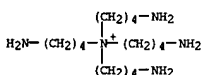


CM 2

CRN 148275-82-5
CMF C16 H40 N5 . C1 O4

CM 3

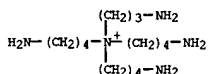
CRN 148275-81-4
CMF C16 H40 N5



L55 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CMF C15 H38 N5 . C1 O4

CM 3

CRN 148275-76-7
CMF C15 H38 N5



CM 4

CRN 14797-73-0
CMF C1 O4



RN 148275-80-3 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, perchlorate, tetraeperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H O4



CM 2

CRN 148275-79-0
CMF C14 H36 N5 . C1 O4

CM 3

CRN 143085-77-2
CMF C14 H36 N5

L55 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CM 4

CRN 14797-73-0
CMF C1 O4



L55 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AB Novel tertiary branched tetraamines, quaternary branched pentaamines, linear pentaamines, and linear hexaamines were distributed as the major polyamines in 6 obligately extremely thermophilic eubacteria belonging to Thermoleophilum, Bacillus, or Hydrogenobacter. The major polyamine of T. album and T. minutum was identified as a quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane (NH₂(CH₂)₃N+((CH₂)₄NH₂)₂(CH₂)₄NH₂) by HPLC, TLC, and gas chromatog.-mass spectrometry. H. thermophilus and H. halophilus contained another quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,7-diamino-4-azaheptane as the major polyamine, and tertiary branched tetraamines (4-(3-aminopropyl)-1,7-diamino-4-azaheptane, 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, and 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane were confirmed as minor components. B. schlegelii contained a branched tetraamine, 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, a branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane, a linear pentaamine, 1,16-diamino-4,8,13-triazaheptadecane and linear hexaamine(s), 1,20-diamino-4,8,12,17-tetraazaeicosane and/or 1,20-diamino-4,8,13,17-tetraazaeicosane.

ACCESSION NUMBER: 1992:567247 CAPLUS

DOCUMENT NUMBER: 117:167247

TITLE: Novel linear and branched polyamines in the extremely thermophilic eubacteria Thermoleophilum, Bacillus and Hydrogenobacter

AUTHOR(S): Hamana, Koki; Nitsui, Masaru; Matsuzaki, Shigeru; Samejima, Keiji; Igarashi, Yasuo; Kodama, Tooru

CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan

SOURCE: Biochemical Journal (1992), 284(3), 741-7

DOCUMENT TYPE: CODEN: BIJOAK; ISSN: 0306-3275

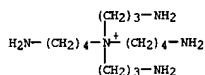
LANGUAGE: Journal

IT 143085-77-2 English

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (of thermophilic bacteria)

RN 143085-77-2 CAPLUS

CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)



=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

17.97

2457.11

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-2.19

-2.92

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DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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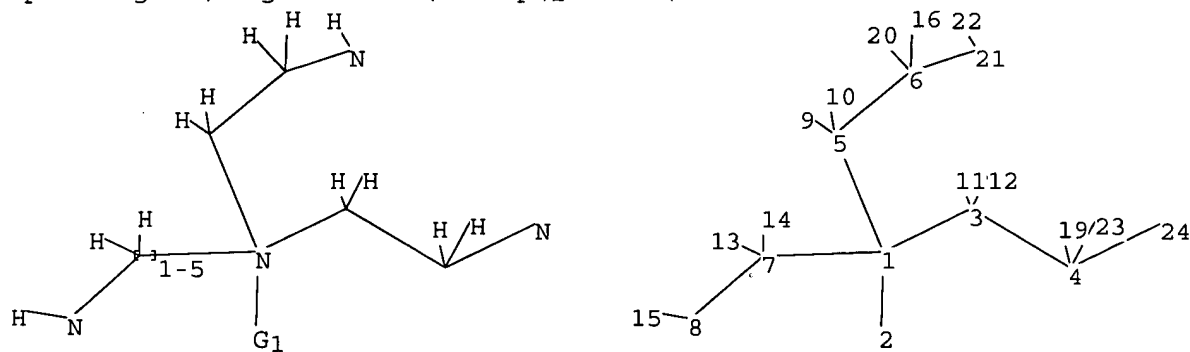
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24
 chain bonds :
 1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22 .
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
 exact bonds :
 3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

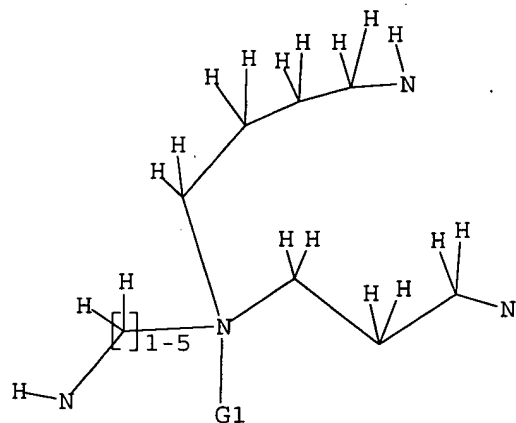
G1:C,H

Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L56 STRUCTURE UPLOADED

=> d query

L56 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 156

SAMPLE SEARCH INITIATED 17:42:15 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 867 TO ITERATE

100.0% PROCESSED 867 ITERATIONS
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 15574 TO 19106

PROJECTED ANSWERS: 0 TO 0

L57 0 SEA SSS SAM L56

=> s l56 full
FULL SEARCH INITIATED 17:42:19 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 16953 TO ITERATE

100.0% PROCESSED 16953 ITERATIONS 15 ANSWERS
SEARCH TIME: 00.00.04

L58 15 SEA SSS FUL L56

=> fil caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	161.33	2618.44
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.92

FILE 'CAPLUS' ENTERED AT 17:42:26 ON 19 APR 2005
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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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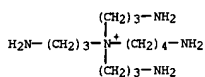
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l58
L59 16 L58

=> d l59 1-16 abs ibib hitstr

L59 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of newly isolated acidophilic, thermophilic and thermoacidophilic archaeobacteria were investigated for the chemotaxonomic significance of polyamine distribution profiles. In addition to spermidine, spermine and agmatine, a quaternary branched penta-amine, N4-bis(aminopropyl)spermidine, was found in thermophilic Thermococcus walatunensis, Thermococcus sagaeus and Pyrococcus glycovorans belonging to the order Thermococcales. An acidophilic euryarchaeon, Ferroplasma acidiphilum located in the order Thermoplasmatales, contained spermidine and agmatine. Norspermidine, spermidine, norspermine and spermine were found in thermoacidophilic Acidilobus acetatus and thermophilic Thermodiscus maritimus located in the order Desulfurococcales, and in thermophilic Pyrobaculum arsenaticum, Pyrobaculum oguniense, Vulcanisaeta distributa and Vulcanisaeta souniana belonging to the order Thermoproteales; however, the four genera differ on their tetra- and penta-amine levels. Thermophilic Staphylothermus hellenicus belonging to Desulfurococcales contained caldopentamine, caldohexamine and N1-acetylcaldopentamine in addition to norspermidine, spermidine and norspermine. This is the first report on the occurrence of acetylated penta-amine in nature.

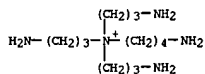
ACCESSION NUMBER: 2004:69144 CAPLUS
 DOCUMENT NUMBER: 141:274078
 TITLE: Cellular polyamines of the acidophilic, thermophilic and thermoacidophilic archaeobacteria, Acidilobus, Ferroplasma, Pyrobaculum, Pyrococcus, Staphylothermus, Thermococcus, Thermodiscus and Vulcanisaeta
 AUTHOR(S): Hamana, Koei; Tanaka, Takehiko; Hosoya, Ryuichi; Niitsu, Masaru; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Maebashi, 371-8514, Japan
 SOURCE: Journal of General and Applied Microbiology (2003), 49(5), 287-293
 CODEN: JGAMAS; ISSN: 0022-1260
 PUBLISHER: Microbiology Research Foundation
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1, N4-Bis(aminopropyl)spermidine
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (polyamines in relation to taxonomy of archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L59 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of 4 new thermophiles located in 3 early branched eubacterial clades, were investigated for the chemotaxonomic significance of polyamine distribution profiles. The thermophilic anaerobic Thermosipho japonicus, belonging to the order Thermotogales, contained norspermidine, norspermine and thermospermine in addition to spermidine and spermine. The polyamine profile was identical to the polyamine composition of Thermotoga, Feravidobacterium and Petrotoga species of the order. Spermidine, norspermidine, spermine, N4-bis(aminopropyl)spermidine and agmatine were found in thermophilic aerobic Thermoerobacter marianensis. Some differences were observed in the polyamine compns. of the phylogenetically related thermophilic anaerobes, Moorella, Dictyoglomus, Thermoanaerobacterium and Thermoanaerobacter species. Thermophilic anaerobic C. kristjanssonii and C. owensensis contained a linear penta-amine, thermopentamine, and 2 quaternary branched penta-amines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine, as the major polyamines. A novel tertiary branched penta-amine, N4-aminopropylspermine, was found in the 2 Caldicellulosiruptor species.

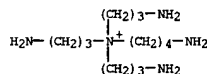
ACCESSION NUMBER: 2001:329885 CAPLUS
 DOCUMENT NUMBER: 135:58231
 TITLE: Polyamines of the thermophilic eubacteria belonging to the genera Thermosipho, Thermoerobacter and Caldicellulosiruptor
 AUTHOR(S): Hamana, Koei; Niitsu, Masaru; Samejima, Keiichi; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
 SOURCE: Microbios (2001), 104(409), 177-185
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines of Thermosipho, Thermoerobacter and Caldicellulosiruptor)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L59 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB A plant protection formulation contains at least one Cu2+-containing compound as an active ingredient, characterized in that the active ingredient comprises an amount of at least one chelate of Cu2+ with a polyamine compound
 ACCESSION NUMBER: 2003:715744 CAPLUS
 DOCUMENT NUMBER: 139:241667
 TITLE: Plant protection formulation containing a copper-polyamine chelate
 INVENTOR(S): Camerlynck, Rudiger; De Potter, Pierre
 PATENT ASSIGNEE(S): BMS Micro-Nutrients N. V., Belg.
 SOURCE: Eur. Pat. Appl., 14 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

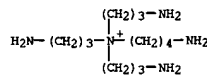
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1342413	A1	20030910	EP 2002-447035	20020308
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:			EP 2002-447035	20020308
IT 143085-76-10, copper chelates				
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (plant protection formulation containing)				
RN 143085-76-1 CAPLUS				
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)				



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

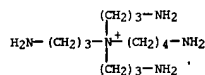
L59 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of eight new thermophilic archaeobacteria were investigated to determine the chemotaxonomic significance of polyamine distribution profiles. Hyperthermoacidophilic Caldivirga maquilingensis belonging to the family Thermoproteaceae of the Crenarchaeota have a unique polyamine profile comprising spermidine, norspermidine and norspermine as the major polyamines. Within the order Thermococcales of the Euryarchaeota, the major polyamines of an extremely thermophilic terrestrial species of Thermococcus, T. zilligii, were spermidine and agmatine, whereas hyperthermophilic submarine species of Thermococcus and hyperthermophilic submarine Palaeococcus ferrophilus contained a quaternary branched penta-amine, N4-bis(aminopropyl)spermidine, as a major polyamine. A hyperthermophilic methanogen, Methanothermobacter sociabilis, belonging to Euryarchaeota, contained spermidine and spermine as the major polyamine.

ACCESSION NUMBER: 2001:186968 CAPLUS
 DOCUMENT NUMBER: 134:323232
 TITLE: Polyamines of the hyperthermophilic archaeobacteria belonging to the genera Thermococcus and Methanothermobacter and two new genera Caldivirga and Palaeococcus
 AUTHOR(S): Hamana, Koei; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
 SOURCE: Microbios (2001), 104(408), 105-114
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines of archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

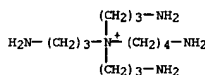
L59 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Polyamines were identified in a thermophilic, sulfide-oxidizing bacterium. Comparable polyamines were found in Aquifex, Hydrogenobacter, and Caldococcus.
 ACCESSION NUMBER: 2001:30292 CAPLUS
 DOCUMENT NUMBER: 134:204849
 TITLE: Occurrence of quaternary branched penta-amines in a large sausage-shaped thermophilic sulfide-oxidizing bacterium predominated in hot spring sulfur-turf bacterial mats
 AUTHOR(S): Hamana, Koei; Kato, Kenji
 CORPORATE SOURCE: School of Health Sciences, Faculty of Medicine, Gunma University, Maebashi, 371-8514, Japan
 SOURCE: Journal of General and Applied Microbiology (2000), 46(3), 179-182
 CODEN: JGAMA5; ISSN: 0022-1260
 PUBLISHER: Microbiology Research Foundation
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines in large sausage-shaped thermophilic sulfide-oxidizing bacterium from hot spring sulfur-turf bacterial mats)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

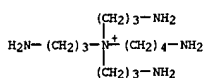
L59 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of thermophilic eubacteria and archaeobacteria were investigated for the chemotaxonomic significance of polyamine distribution profiles within thermophiles. A quaternary branched penta-amine, N4-bis(aminopropyl)norspermidine, and another quaternary branched penta-amine, N4-bis(aminopropyl)spermidine, were the main polyamines in the thermophilic eubacteria, Aquifex pyrophilus and Thermodesulfobacterium mobile, resp. These quaternary amines and linear hexa-amines were also found in Thermus thermophilus but not detected in the new Thermus species, T. brookianus and T. oshimai, and Methanothermobacter species, M. chianophilus and M. silvanus. In new members of Crenarchaeota, Sulfolobus solfataricus and Sulfolobus islandicus contained norspermidine, spermidine, norspermine and spermine. In addition to these triamines and tetraamines, Stetteria hydrogenophila and Thermococcus modestus contained homocardipentamine and/or thermopentamine, and Sulfolobus solfataricus contained cadaverine and homospemidine. The main polyamine of the hyperthermophilic Euryarchaeota, Pyrococcus horikoshii and Thermococcus furiosus, was N4-bis(aminopropyl)spermidine. Hyperthermophilic Methanothermobacter fervidus and Methanothermobacter kandleri contained spermidine, spermine and agmatine, and lacked long and branched polyamines, suggesting that the distribution of long and branched polyamines are not essential for thermophilic methanogens.

ACCESSION NUMBER: 1999:329098 CAPLUS
 DOCUMENT NUMBER: 131:113477
 TITLE: Polyamines of the thermophilic eubacteria belonging to the genera Aquifex, Thermodesulfobacterium, Thermus and Methanothermobacter, and the thermophilic archaeobacteria belonging to the genera Sulfolobus, Sulfolobus, Pyrococcus, Thermococcus, Methanothermobacter and Methanothermobacter
 AUTHOR(S): Hamana, K.; Hamana, H.; Shinozawa, T.; Niitsu, M.; Samejima, K.; Itoh, T.
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
 SOURCE: Microbios (1999), 97(387), 117-130
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines of thermophilic eubacteria and thermophilic archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

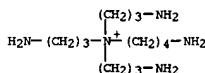
L59 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of several thermophilic eubacteria and archaeobacteria were investigated by high performance liquid chromatog. and gas chromatog. A hyperthermophilic eubacterium, Thermotoga maritima, contained a linear pentaamine and a linear hexaamine. The moderate thermophiles, Thermotoga elfii and Thermodesulfobacterium yellowstonii contained a linear pentaamine. A quaternary branched pentaamine, N4-bis(aminopropyl)spermidine, was the major polyamine in extremely thermophilic Thermococcus species. Long linear and branched polyamines occurred in the extreme thermophiles, Thermus and Rhodothermus, but were not detected in moderately thermophilic Methanothermobacter. In archaeobacteria, linear pentaamines were distributed in hyperthermophilic Aeropyrum. A moderately thermophilic hyperacidophile, Picrophilus, contained spermidine and lacked longer amines. N4-bis(aminopropyl)spermidine was found in a hyperthermophilic methanogen, Methanococcus jannaschii, as a major polyamine, but not detected in extremely/moderately thermophilic Methanococcus and Methanobacterium species. This is the first report on the occurrence of quaternary branched polyamine in methanogenic archaeobacteria. The chemotaxonomic and phylogenetic significance of the distribution of long linear and branched polyamines possibly associated with their thermophily exist in the thermophiles.
 ACCESSION NUMBER: 1998:645673 CAPLUS
 DOCUMENT NUMBER: 129:341520
 TITLE: Polyamines of the thermophilic eubacteria belonging to the genera Thermotoga, Thermodesulfobacterium, Thermococcus, Rhodothermus and Methanothermobacter, and the thermophilic archaeobacteria belonging to the genera Aeropyrum, Picrophilus, Methanobacterium and Methanococcus
 AUTHOR(S): Hamana, K.; Niitsu, M.; Samejima, K.; Itoh, T.; Hamana, H.; Shinozawa, T.
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371, Japan
 SOURCE: Microbios (1998), 93(377), 7-21
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines of thermophilic eubacteria and thermophilic archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

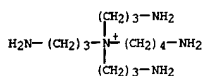
L59 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB The five hyperthermophilic archaeobacteria located on the phylogenetically divergent four orders of Archaeoglobales, Thermococcales, Theoproteales and Sulfolobales, resp., varied in their cellular polyamine components. Archaeoglobus fulgidus and Archaeoglobus profundus contained two quaternary branched penta-amines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)-norspermidine, as a major polyamine in addition to spermidine and spermine. Spermidine, spermine, a tertiary branched tetra-amine, N4-aminopropylspermidine, and N4-bis(aminopropyl)spermidine were the major polyamines and canavanine was the minor polyamine in Thermococcus peptonophilus. Pyrobaculum aerophilum and Sulfolobus hakenensis contained norspermidine, spermidine and norspermine as the major polyamines but they lacked either branched or long linear polyamines.

ACCESSION NUMBER: 1997:95001 CAPLUS
 DOCUMENT NUMBER: 126:183564
 TITLE: Polyamines of hyperthermophilic archaeobacteria, Archaeoglobus, Thermococcus, Pyrobaculum and Sulfolobus
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keiichi; Itoh, Takashi
 CORPORATE SOURCE: Coll. Med. Care Technology, Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 87(351), 69-76
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines of hyperthermophilic archaeobacteria, Archaeoglobus, Thermococcus, Pyrobaculum and Sulfolobus)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



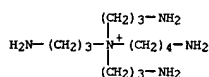
L59 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of the seeds, seedlings, and some other tissues of 15 leguminous plants were analyzed by high performance liquid chromatog. and gas chromatog. A novel tertiary branched pentaamine, N5-aminobutylhomospermine, was detected in the seed of *Vicia villosa* and another novel quaternary branched pentaamine, N4-bis(aminopropyl)spermidine, in the seed of *Crotalaria spectabilis*. Norspermine and a novel linear pentaamine, caldopentamine, were found in the seed of *Gleditsia japonica*. Other unusual polyamines such as norspermidine, homospermidine, thermospermine, N4-methylthermospermine, homospermine, and N-(3-aminopropyl)aminopropanol occur widely within leguminous seeds. Nine groups of plant response were found with respect to increases of diaminopropane, putrescine, cadaverine, and agmatine in the leguminous seedlings after germination.

ACCESSION NUMBER: 1997:8218 CAPLUS
 DOCUMENT NUMBER: 126:72607
 TITLE: Further polyamine analyses of leguminous seeds and seedlings: the occurrence of novel linear, tertiary branched and quaternary branched pentaamines
 AUTHOR(S): Hamana, Koei; Niitsu, Masaru; Samejima, Kei-jiro
 CORPORATE SOURCE: College of Medical Care and Technology, Gunma University, Gunma, 371, Japan
 SOURCE: Canadian Journal of Botany (1996), 74(11), 1766-1772
 CODEN: CJBOW; ISSN: 0008-4026
 PUBLISHER: National Research Council of Canada
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (polyamine anal. of leguminous seeds and seedlings)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



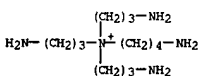
L59 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of seventeen strains of thermophilic Gram-pos. anaerobes belonging to seven genera of clostridia were analyzed by high-performance liquid chromatog. and gas chromatog. Caldicellulosiruptor contained spermidine, spermine, thermospermine, thermopentamine, two tertiary branched tetraamines (N4-aminopropylspermidine and N4-aminopropylhomospermidine) and two quaternary branched pentaamines [N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine]. The major polyamines of Caloramator, Coprothermobacter, Moorella, Thermoanaerobacter, Thermoanaerobacterium and thermophilic Clostridium were putrescine, spermidine and spermine. N4-aminopropylspermidine and N4-bis(aminopropyl)spermidine were found as minor polyamines in some cultures of Moorella and Thermoanaerobacter.

ACCESSION NUMBER: 1996:423666 CAPLUS
 DOCUMENT NUMBER: 125:81445
 TITLE: Polyamines of thermophilic Gram-positive anaerobes belonging to the genera Caldicellulosiruptor, Caloramator, Clostridium, Coprothermobacter, Moorella, Thermoanaerobacter and Thermoanaerobacterium
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Kei-jiro
 CORPORATE SOURCE: Coll. Medical Care Technol., Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 85(345), 213-222
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (polyamines of thermophilic Gram-pos. anaerobes)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



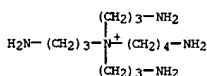
L59 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of thermophilic eubacteria and hyperthermophilic archaeobacteria were analyzed by high-performance liquid chromatog. and gas chromatog. Thermotoga, Petrotoga, Feravidobacterium and Dictyoglomus contained tetraamines such as spermine, norspermine and thermospermine, penta-amines such as caldopentamine, homocaldopentamine and thermopentamine, and a hexa-amine, caldohexamine. These linear polyamines and the quaternary branched pentaamines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine were found in Thermoanaerobacter cellulolyticus. N4-bis(aminopropyl)spermidine, spermidine and spermine were the polyamine components of the other authentic Thermoanaerobacter species. The main polyamine of Thermodesulfobacterium commune was N4-bis(aminopropyl)spermidine. In archaeobacteria, an unusual triamine, homospermidine, occurred in Desulfurococcus and Staphylothermus. Caldopentamine, thermopentamine and caldohexamine were detected in Pyrodicticum, Hyperthermus and Staphylothermus. Thermoproteus and Pyrobaculum contained tri- and tetra-amines but lacked long linear and branched polyamines. The long linear and branched polyamines are widely distributed in thermophilic eubacteria and archaeobacteria and are chemotaxonomically useful in the thermophiles.

ACCESSION NUMBER: 1996:393216 CAPLUS
 DOCUMENT NUMBER: 125:53207
 TITLE: Distribution of long linear and branched polyamines in thermophilic eubacteria and hyperthermophilic archaeobacteria
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Kei-jiro; Itoh, Takashi
 CORPORATE SOURCE: Coll. Medical Care Technol., Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 85(342), 19-33
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (distribution of long linear and branched polyamines in thermophilic eubacteria and hyperthermophilic archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



L59 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of thermophilic archaeobacteria were analyzed by HPLC and gas chromatog. Thermoplasma acidophilum and Thermoplasma volcanium ubiquitously contained spermidine and spermine. Four spp. of Sulfolobus, S. acidocaldarius, S. solfataricus, S. metallicus, and S. shibatae, 2 spp. of Acidianus, A. brierleyi and A. infernus, and Metallosphaera sedula contained norspermidine and norspermine in addition to spermidine and spermine, but quant. distribution profiles were species-specific. A tertiary tetraamine, N4-aminopropylspermidine, and a quaternary pentaamine, N4-bis(aminopropyl)spermidine, were detected as major polyamines in 3 spp. of Thermococcus, T. celer, T. litoralis, and T. stetteri, and 2 Pyrococcus spp., P. furiosus and P. woesei. This is the 1st report of the occurrence of branched polyamines in archaeobacteria.

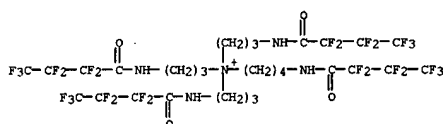
ACCESSION NUMBER: 1995:82668 CAPLUS
 DOCUMENT NUMBER: 122:5033
 TITLE: Occurrence of tertiary and quaternary branched polyamines in thermophilic archaeobacteria
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Kei-jiro; Sakane, Takeshi; Yokota, Akira
 CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan
 SOURCE: Microbios (1994), 79(319), 109-19
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (tertiary and quaternary branched polyamines in thermophilic archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



L59 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN

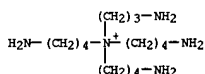
AB Using heptafluorobutyl derivs. of 27 linear di-, tri-, tetra-, penta- and hexamines containing various sets of isomers, and 4 tertiary tetraamines and 5 quaternary pentaamines, mostly with 3 or 4 methylene chain units, their gas chromatog. (GC) and gas chromatog.-mass spectrometric (GC-MS) properties were compared and examined. Several results useful for their systematic anal. were found: assured baseline separation of 1 methylene difference in linear di- and polyamines and tertiary tetraamines by GC; distinct pyrolytic decomposition patterns of quaternary pentaamines by GC; distinct cleavage patterns of 3 or 4 methylene chain units by GC-MS; and distinct mass spectra of linear polyamines and tertiary tetraamines by GC-MS.

ACCESSION NUMBER: 1993:551383 CAPLUS
DOCUMENT NUMBER: 119:151383
TITLE: Systematic analysis of naturally occurring linear and branched polyamines by gas chromatography and gas chromatography-mass spectrometry
AUTHOR(S): Niitsu, Masaru; Samejima, Keiji; Matsuzaki, Shigeru; Hamana, Koei
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Josai University, 1-1 Keyakidai, Sakado, Saitama, 350-02, Japan
SOURCE: Journal of Chromatography (1993), 641(1), 115-23
CODEN: JOCRAH; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 149981-89-5 149981-90-8 149981-91-9
RL: ANT (Analyte); ANST (Analytical study)
(gas chromatog. and mass spectrometry of)
RN 149981-89-5 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N,N-tris[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)

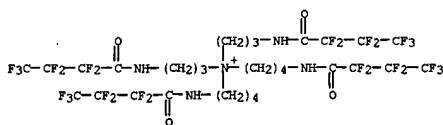


RN 149981-90-8 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N-[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]-N,N-bis[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)

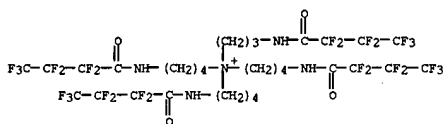
L59 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)



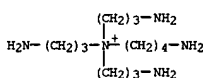
L59 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)



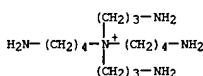
RN 149981-91-9 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N-bis[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]-N-[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)



IT 143085-76-1 143085-77-2 148275-76-7
RL: PRP (Properties); ANST (Analytical study)
(gas chromatog.-mass spectrometry of, as heptafluorobutyl derivative)
RN 143085-76-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-77-2 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)

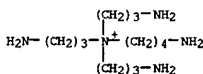


RN 148275-76-7 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)- (9CI) (CA INDEX NAME)

L59 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2005 ACS ON STN

AB Tertiary tetraamines and quaternary pentaamines composed of aminopropyl and/or aminobutyl groups were synthesized as authentic samples for the identification of naturally occurring branched polyamines. Four tertiary tetraamines, including [HZN(CH₂)_n]₃N₄HCl (n = 3, 4) and [HZN(CH₂)₃]₂N₄HCl, were obtained by alkylating the free secondary amine group of dipthaloyl derivs. of sym-norspermidine or sym-homospermidine with N-(3-bromopropyl)phthalimide or N-(4-bromobutyl)phthalimide in the presence of KF-Celite. Five quaternary pentaamines, e.g., [HZN(CH₂)_n]₄N⁺Cl⁻·4HCl (n = 3, 4), were obtained by fusing triphthaloyl derivs. of the tertiary tetraamines with an excess amount of N-(3-iodopropyl)phthalimide or N-(4-iodobutyl)phthalimide. The present methods are simple and achieved high yields. The ¹³C-NMR spectra of these branched polyamines were recorded in D₂O as fully protonated forms, and all ¹³C chemical shifts were assigned consistently.

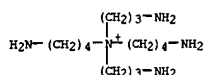
ACCESSION NUMBER: 1993:427654 CAPLUS
DOCUMENT NUMBER: 119:27654
TITLE: Syntheses of tertiary tetraamines and quaternary pentaamines with three and four methylene chain units
AUTHOR(S): Niitsu, Masaru; Sano, Hira; Samejima, Keiji
CORPORATE SOURCE: Fac. Pharm. Sci., Josai Univ., Sakado, 350-02, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1992), 40(11), 2958-61
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 119:27654
IT 148275-61-0P 148275-62-1P 148275-63-2P
148275-70-1P 148275-78-9P 148275-80-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 148275-61-0 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)



● Cl⁻

● 4 HCl

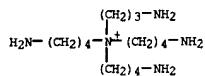
RN 148275-62-1 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)



● C1-

● 4 HCl

RN 148275-63-2 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)



● C1-

● 4 HCl

RN 148275-70-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)-, perchlorate, tetraperchlorate (9CI) (CA INDEX NAME)

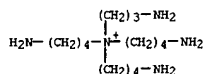
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CRN 7601-90-3
CMF C1 H 04



CM 2

CRN 148275-69-8



CM 4

CRN 14797-73-0
CMF C1 04



RN 148275-90-3 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, perchlorate, tetraperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H 04

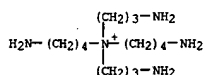


CM 2

CRN 148275-79-0
CMF C14 H36 N5 . C1 04

CM 3

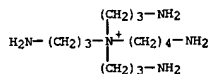
CRN 143085-77-2
CMF C14 H36 N5



CMF C13 H34 N5 . C1 04

CM 3

CRN 143085-76-1
CMF C13 H34 N5



CM 4

CRN 14797-73-0
CMF C1 04



RN 148275-78-9 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)-, perchlorate, tetraperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H 04



CM 2

CRN 148275-77-8
CMF C15 H38 N5 . C1 04

CM 3

CRN 148275-76-7
CMF C15 H38 N5

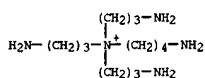
CM 4

CRN 14797-73-0
CMF C1 04



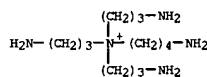
L59 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of thermophilic gram-neg. eubacteria, *Rhodothermus marinus* ATCC 43812, *Thermus* sp. ATCC 43814, and *Thermomonas lapaum* ATCC 43542 were analyzed by HPLC and gas chromatog.-mass spectrometry. *R. marinus* contained spermidine, spermine, thermopentamine, a tertiary tetraamine (N4-aminopropylspermidine), and a quaternary pentaamine (N4-bis(aminopropyl)spermidine). *Thermus* sp. ATCC 43814 contained putrescine, cadaverine, norspermidine, spermidine, homospermidine, norspermine, spermine, thermospermine, aminopropylhomospermidine, caldopentamine, agmatine, 2 tertiary tetraamines (N4-aminopropylhomospermidine and N4-aminopropylspermidine), and 2 quaternary pentaamines (N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)spermidine). Homospermidine and homospermine were detected in *T. lapaum* as the major polyamine. These distribution patterns of long and branched polyamines are distinctive in the thermophiles, indicating that unusual polyamine profiles serve to estimate chemotaxonomic and phylogenetic relations within thermophilic eubacteria.

ACCESSION NUMBER: 1993:251160 CAPLUS
 DOCUMENT NUMBER: 118:251160
 TITLE: Distribution of unusual long and branched polyamines in thermophilic eubacteria belonging to "Rhodothermus," *Thermus* and *Thermomona*
 AUTHOR(S): Hamana, Koel; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keiji; Matsuzaki, Sigeru
 CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan
 SOURCE: Journal of General and Applied Microbiology (1992), 38(6), 575-84
 CODEN: JGAMA9; ISSN: 0022-1260
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BIOL (Biological study)
 (of thermophilic eubacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (SCI) (CA INDEX NAME)

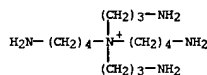


L59 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Novel tertiary branched tetraamines, quaternary branched pentaamines, linear pentaamines, and linear hexaamines were distributed as the major polyamines in 6 obligately extremely thermophilic eubacteria belonging to *Thermoleophilum*, *Bacillus*, or *Hydrogenobacter*. The major polyamine of *T. album* and *T. minutum* was identified as a quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane (NH₂(CH₂)₃N+((CH₂)₄NH₂)₂(CH₂)₄NH₂) by HPLC, TLC, and gas chromatog.-mass spectrometry. *H. thermophilus* and *H. halophilus* contained another quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,7-diamino-4-azaheptane as the major polyamine, and tertiary branched tetraamines (4-(3-aminopropyl)-1,7-diamino-4-azaheptane, 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, and 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane were confirmed as minor components. *B. schlegelii* contained a branched tetraamine, 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, a branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane, a linear pentaamine, 1,16-diamino-4,8,13-triazaheptadecane and linear hexaamine(s), 1,20-diamino-4,8,12,17-tetraazaeicosane and/or 1,20-diamino-4,8,13,17-tetraazaeicosane.

ACCESSION NUMBER: 1992:567247 CAPLUS
 DOCUMENT NUMBER: 117:167247
 TITLE: Novel linear and branched polyamines in the extremely thermophilic eubacteria *Thermoleophilum*, *Bacillus* and *Hydrogenobacter*
 AUTHOR(S): Hamana, Koel; Niitsu, Masaru; Matsuzaki, Sigeru; Samejima, Keiji; Igarashi, Yasuo; Kodama, Tooru
 CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan
 SOURCE: Biochemical Journal (1992), 284(3), 741-7
 CODEN: BIJOAK; ISSN: 0306-3275
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1 143085-77-2
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (of thermophilic bacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (SCI) (CA INDEX NAME)



RN 143085-77-2 CAPLUS
 CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (SCI) (CA INDEX NAME)



=> fil reg
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
79.94	2698.38

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-11.68	-14.60

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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conducting SmartSELECT searches.

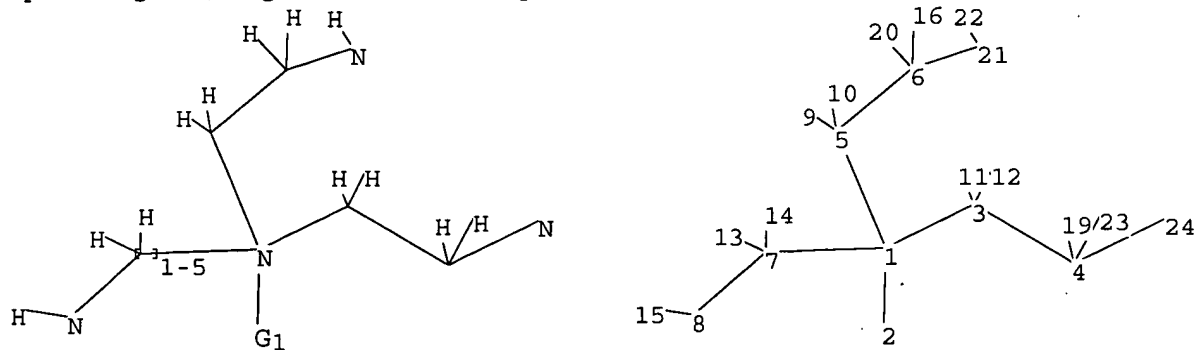
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

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information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



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 chain bonds :
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 6-21 7-8 7-13 7-14 8-15 21-22
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
 exact bonds :
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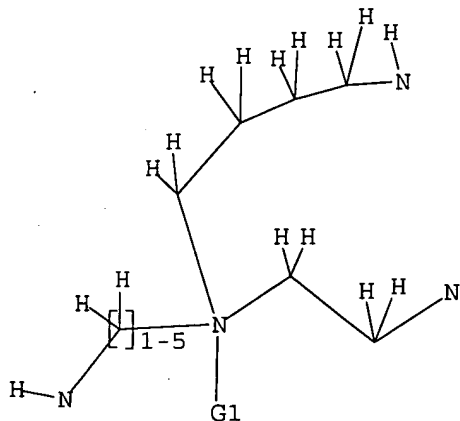
G1:C,H

Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L60 STRUCTURE UPLOADED

=> d query

L60 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 160

SAMPLE SEARCH INITIATED 17:44:32 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 1290 TO ITERATE

77.5% PROCESSED 1000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**

PROJECTED ITERATIONS: 23646 TO 27954
 PROJECTED ANSWERS: 0 TO 0

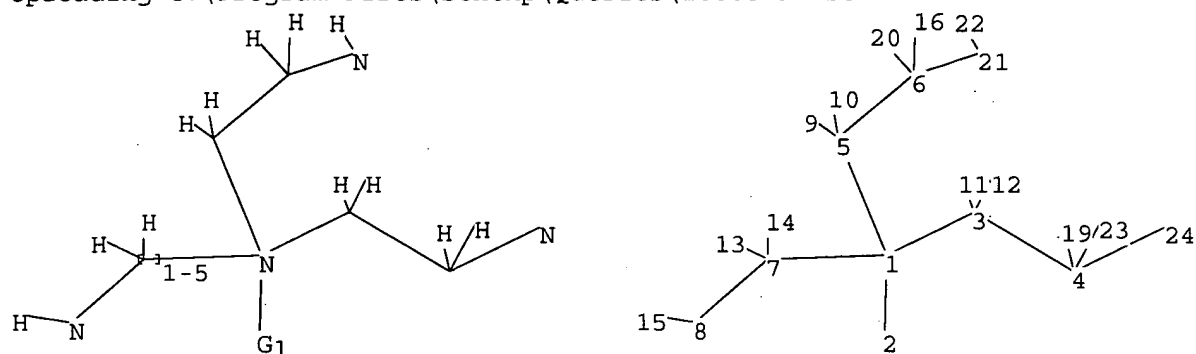
L61 0 SEA SSS SAM L60

=> s l60 full
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 FULL SCREEN SEARCH COMPLETED - 25361 TO ITERATE

100.0% PROCESSED 25361 ITERATIONS 0 ANSWERS
 SEARCH TIME: 00.00.01

L62 0 SEA SSS FUL L60

=>
 Uploading C:\Program Files\Stnexp\Queries\10005294.str



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 chain bonds :
 1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
 exact bonds :
 3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

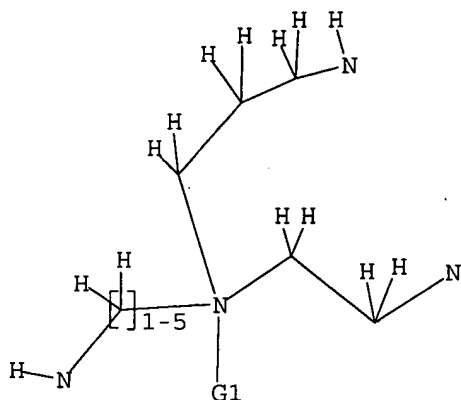
G1:C,H

Match level :
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 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L63 STRUCTURE UPLOADED

=> d query

L63 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 163

SAMPLE SEARCH INITIATED 17:45:14 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 1544 TO ITERATE

64.8% PROCESSED 1000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

3 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 28523 TO 33237
 PROJECTED ANSWERS: 3 TO 221

L64 3 SEA SSS SAM L63

=> s 163 full

FULL SEARCH INITIATED 17:45:19 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 30327 TO ITERATE

100.0% PROCESSED 30327 ITERATIONS
 SEARCH TIME: 00.00.01

24 ANSWERS

L65 24 SEA SSS FUL L63

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
323.09	3021.47

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-14.60

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FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 165

L66 7 L65

=> d 166 1-7 abs ibib hitstr

L66 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polymers are formed in the presence of nucleic acid using template polymerization
 Also, polymerization occur in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. For example, step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

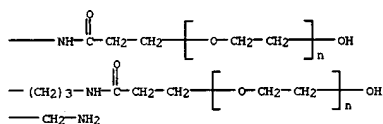
ACCESSION NUMBER: 2002:41634 CAPLUS
 DOCUMENT NUMBER: 136:107515
 TITLE: Polymer formation in presence of nucleic acid using template polymerization
 INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetskoy, Vladimir S.; Slatum, Paul M.; Hanson, Lisa J.
 PATENT ASSIGNEE(S): Mirus Corp., USA
 SOURCE: U.S., 26 pp., Cont.-in-part of U.S. Ser. No. 778,657.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 7
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6339067	B1	20020115	US 1997-692	19971230
US 6126964	A	20001003	US 1997-778657	19970103
US 2001024829	A1	20010927	US 2001-753990	20010102
US 6383811	B2	20020507	US 2001-993216	20011116
US 2002165184	A1	20021107	US 2001-4763	20011205
US 6706922	B2	20040316	US 2001-5294	20011205
US 2002061287	A1	20020523	US 2004-755785	20040112
US 2002085989	A1	20020704	US 1997-778657	A2 19970103
US 2004161463	A1	20040819	US 1996-9593P	P 19960104
PRIORITY APPLN. INFO.:			US 1997-692	A2 19971230
			US 1999-464871	A3 19991216
			US 1999-174132P	P 19991231
			US 2001-993216	A3 20011116

IT 389132-33-6P
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (polymer formation in presence of nucleic acid using template polymerization)
 RN 389132-33-6 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with dimethyl 3,3'-dithiobis[propanimidate] and $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[[(2-aminoethyl)nitriilo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α -hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2), sodium salt (9CI) (CA INDEX NAME)

CM 1

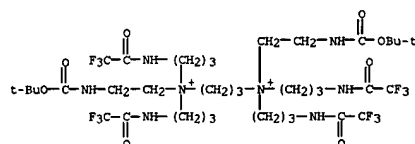
L66 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 PAGE 1-B



CM 6
 CRN 14477-72-6
 CMF C2 F3 O2



IT 210292-26-5P 210292-28-7P 210292-30-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (polymer formation in presence of nucleic acid using template polymerization)
 RN 210292-26-5 CAPLUS
 CN 1,3-Propanediaminium, N,N',N''-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-N,N,N',N''-tetrakis[3-[[[(trifluoroacetyl)amino]propyl]-, dibromide (9CI) (CA INDEX NAME)

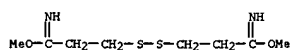


● 2 Br⁻

RN 210292-28-7 CAPLUS
 CN 1,3-Propanediaminium, N,N',N''-tetrakis(3-aminopropyl)-N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

L66 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 389132-32-5
 CMF (C8 H16 N2 O2 S2 . C4 H6 O2 . (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2)x
 CCI FMS
 CM 2
 CRN 59012-54-3
 CMF C8 H16 N2 O2 S2

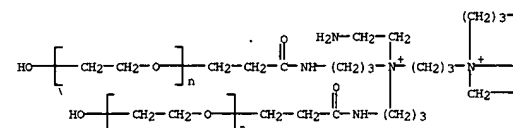


CM 3
 CRN 79-41-4
 CMF C4 H6 O2



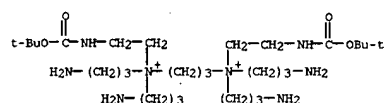
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 CRN 210292-30-1
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 CM 5
 CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI FMS

PAGE 1-A



L66 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CM 1

CRN 210292-27-6
 CMF C29 H66 N8 O4

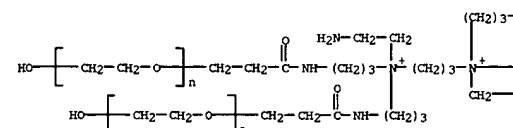


CM 2
 CRN 14477-72-6
 CMF C2 F3 O2

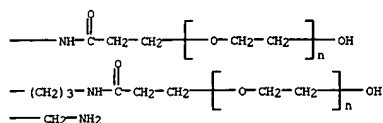


RN 210292-30-1 CAPLUS
 CN Poly(oxy-1,2-ethanediyl), $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[[(2-aminoethyl)nitriilo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α -hydroxy-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)
 CM 1
 CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI FMS

PAGE 1-A



PAGE 1-B



CM 2

CRN 14477-72-6
CMF C2 F3 O2

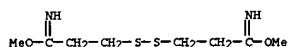
IT 389132-31-4P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

RM 389132-31-4 CAPLUS

CM Propanimidic acid, 3,3'-dithiobis-, dimethyl ester, polymer with N,N'-bis(2-aminoethyl)-1,3-propanediamine and $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[(2-aminoethyl)nitri]o]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α -hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

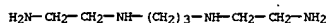
CM 1

CRN 59012-54-3
CMF C8 H16 N2 O2 S2

CM 2

CRN 4741-99-5
CMF C7 H20 N4

L66 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



CM 3

CRN 210292-30-1

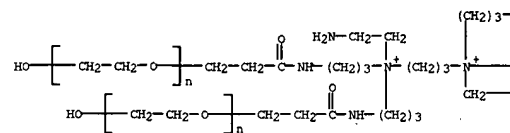
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2

CM 4

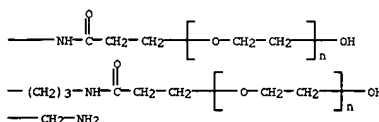
CRN 210292-29-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
CCI PMS

PAGE 1-A



PAGE 1-B



CM 5

CRN 14477-72-6
CMF C2 F3 O2

L66 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AB Polymers are formed in the presence of nucleic acid using template polymerization

Also, polymerization occurs in heterophase systems. These methods can be used

for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. Step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

ACCESSION NUMBER: 1999:708870 CAPLUS

DOCUMENT NUMBER: 131:327545

TITLE: Polymer formation in the presence of nucleic acid using template polymerization

INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.

PATENT ASSIGNEE(S): Mirus Corporation, USA

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXKD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

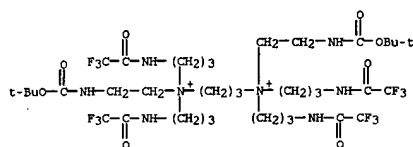
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955825	A1	19991104	WO 1999-US8965	19990423
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1073707	A1	20010207	EP 1999-920014	19990423
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				
PRIORITY APPLN. INFO.:			US 1998-70299	A 19980430
			WO 1999-US8965	W 19990423

IT 210292-26-5P 210292-28-7P 210292-30-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polymer formation in the presence of nucleic acid using template polymerization)

RM 210292-26-5 CAPLUS

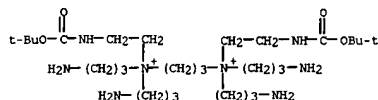
CM 1,3-Propanediaminium, N,N'-bis[2-[(1,1-dimethylethoxy)carbonyl]amino]ethyl 1]-N,N,N',N'-tetrakis[3-[(trifluoroacetyl)amino]propyl]-, dibromide (9CI) (CA INDEX NAME)

● 2 Br⁻

RN 210292-28-7 CAPLUS
 CN 1,3-Propanediaminium, N,N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[1,1-dimethylethoxy]carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 210292-27-6
 CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6
 CMF C2 F3 O2

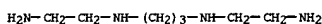


RN 210292-30-1 CAPLUS
 CN Poly(oxy-1,2-ethanediyl), α,α',α'',α'''-[1,3-propanediylbis[[[(2-aminoethyl)nitrido]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α-hydroxy]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CM 1

CRN 4741-99-5
 CMF C7 H20 N4



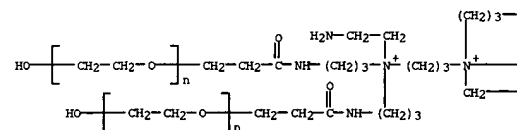
CM 2

CRN 210292-30-1
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2

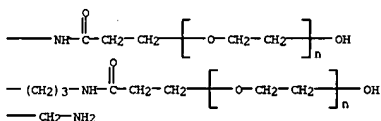
CM 3

CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI PMS

PAGE 1-A



PAGE 1-B

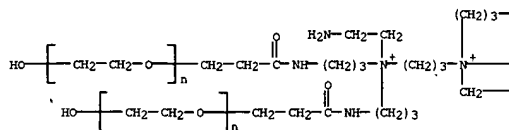


CM 4

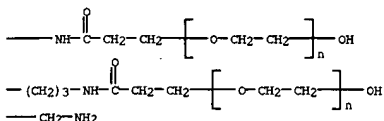
CRN 14477-72-6
 CMF C2 F3 O2

CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI PMS

PAGE 1-A



PAGE 1-B



CM 2

CRN 14477-72-6
 CMF C2 F3 O2



IT 248915-96-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(polymer formation in the presence of nucleic acid using template polymerization)

RN 248915-96-0 CAPLUS

CN 1,3-Propanediamine, N,N'-bis(2-aminoethyl)-, polymer with α,α',α'',α'''-[1,3-propanediylbis[[[(2-aminoethyl)nitrido]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α-hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AB The self-assembly of supramol. complexes of nucleic acids and polymers is of relevance to several biol. processes including viral and chromatin formation as well as gene therapy vector design. We now show that template polymerization facilitates condensation of DNA into particles that

are <150 nm in diameter. Inclusion of a poly(ethylene glycol)-containing monomer prevents aggregation of these particles. The DNA within the particles remains biol. active and can express foreign genes in cells. The formation or breakage of covalent bonds has until now not been employed to compact DNA into artificial particles.

ACCESSION NUMBER: 1998:648382 CAPLUS

DOCUMENT NUMBER: 130:21826

TITLE: Self-assembly of DNA-polymer complexes using template polymerization

AUTHOR(S): Trubetsky, Vladimir S.; Budker, Vladimir G.; Hanson, Lisa J.; Slattum, Paul M.; Wolff, Jon A.; Hagstrom, James E.

CORPORATE SOURCE: Mirus Corporation, Madison, WI, 53711, USA

SOURCE: Nucleic Acids Research (1998), 26(18), 4178-4185

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 210292-30-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of monomers to study self-assembly of DNA-polymer complexes using template polymerization)

RN 210292-30-1 CAPLUS

CN Poly(oxy-1,2-ethanediyl), $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[[[(2-aminoethyl)nitri]lo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α -hydroxy-, salt with trifluoroacetic acid (1:2) (SCI) (CA INDEX NAME)

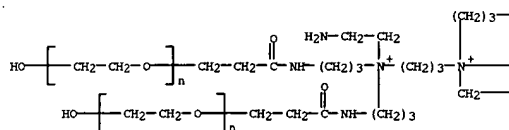
CM 1

CRN 210292-29-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8

CCI PMS

PAGE 1-A



L66 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AB A method of making a compound for delivery to a cell comprising forming a polymer in the presence of a biol. active drug is disclosed. A method of forming polymers in the presence of nucleic acid using template polymerization

and of having the polymerization occur in heterophase systems is further disclosed. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid-binding polymers, for forming supramol. complexes containing nucleic acid and

polymer, and for forming an interpolyelectrolyte complex. The nuclear localizing peptide of SV40 T antigen was copolyd. with dithiobis[succinimidylpropion ate] in the presence of plasmid DNA and this process enabled the formation of complexes that expressed luciferase after transfection into 3T3 cells in culture.

ACCESSION NUMBER: 1998:485169 CAPLUS

DOCUMENT NUMBER: 129:118754

TITLE: Method for making a compound for delivery to cells by forming a polymer in the presence of a template drug, especially nucleic acid

INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetsky, Vladimir S.; Slattum, Paul M.; Hanson, Lisa J.

PATENT ASSIGNEE(S): Mirus Corp., USA

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9829541	A1	19980709	WO 1997-US24089	19971230
US 6126964	A	20001003	US 1997-778657	19970103
EP 958356	A1	19991124	EP 1997-954803	19971230
US 2002061287	A1	20020523	US 2001-4763	20011205
US 2002085989	A1	20020704	US 2001-5294	20011205
US 2004161463	A1	20040819	US 2004-755785	20040112
PRIORITY APPLN. INFO.:				
			US 1997-778657	A 19970103
			US 1996-9593P	P 19960104
			WO 1997-US24089	W 19971230
			US 1999-464871	A3 19991216
			US 2001-993216	A3 20011116

OTHER SOURCE(S): MARPAT 129:118754

IT 210292-26-5P 210292-28-7P 210292-30-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

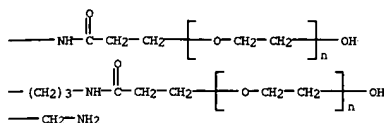
RN 210292-26-5 CAPLUS

CN 1,3-Propanediaminium, N,N',N''-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-N,N',N''-tetrakis[3-[[[(trifluoroacetyl)amino]propyl]-, dibromide (SCI) (CA INDEX NAME)

L66 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)

PAGE 1-B



CM 2

CRN 14477-72-6

CMF C2 F3 O2



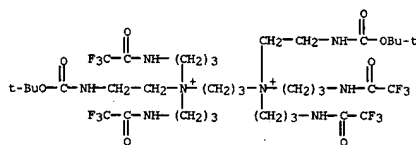
REFERENCE COUNT:

24

THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)



● 2 Br⁻

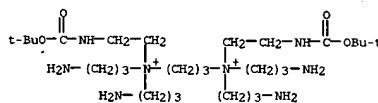
RN 210292-28-7 CAPLUS

CN 1,3-Propanediaminium, N,N',N''-tetrakis(3-aminopropyl)-N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (SCI) (CA INDEX NAME)

CM 1

CRN 210292-27-6

CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6

CMF C2 F3 O2

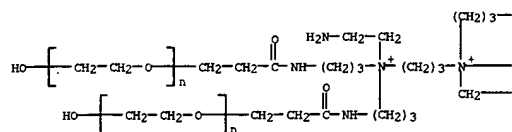


RN 210292-30-1 CAPLUS

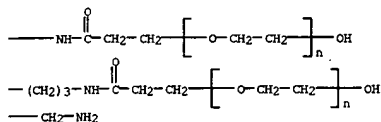
CN Poly(oxy-1,2-ethanediyl), $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[[[(2-aminoethyl)nitri]lo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α -hydroxy-, salt with trifluoroacetic acid (1:2) (SCI) (CA INDEX NAME)

CM 1

PAGE 1-A



PAGE 1-B

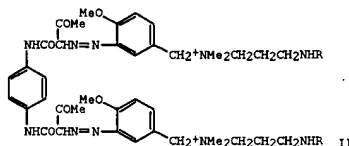


CM 2

CRN 14477-72-6
 CMF C2 F3 O2



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



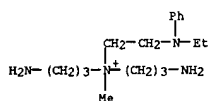
AB A large number of mono- and disazo dyes containing quaternary ammonium groups, e.g. (aminoalkyl)ammonio, [(acylamino)alkyl]ammonio, and (ammonioalkyl)amino, were prepared. Many of these dyes showed good bleed resistance when used as paper dyes and were readily bleachable by hypochlorite. Thus, 3,4-H2N(MeO)C6H3CH2N+Me2CH2CH2NCH2O (I) [38901-93-8] was diazotized and coupled with p-C6H4(NHCOCH2CO2Me)2 [24731-73-5] to give II (R = CHO) [38901-94-9], a water-soluble yellow dye which bled only slightly in the water- and soap-bleed tests on paper and also was easily bleached after being applied to paper. Its hydrolysis product, II (R = H) [38901-95-0], showed essentially the same bleachability but had superior bleed resistance. The preparation of II and many similar cationic aromatic amino compounds is described.

ACCESSION NUMBER: 1979:105604 CAPLUS
 DOCUMENT NUMBER: 90:105604
 TITLE: Water-soluble quaternary ammonium nonheterocyclic azo dyes
 INVENTOR(S): Jefferies, Patrick J.; Crounse, Nathan N.
 PATENT ASSIGNEE(S): Sterling Drug Inc., USA
 SOURCE: U.S., 83 pp. Cont.-in-part of U.S. 3,935,182.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 9
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4103092	A	19780725	US 1975-595864	19750714
US 3709903	A	19730109	US 1970-51676	19700701
US 3839426	A	19741001	US 1970-51690	19700701
GB 1333837	A	19731017	GB 1971-29451	19710622
CA 940528	A1	19740122	CA 1971-116474	19710623
US 3784599	A	19740108	US 1971-201153	19711122
US 3935182	A	19760127	US 1973-332511	19730214
CA 940121	A2	19740115	CA 1973-163853	19730216
US 3996282	A	19761207	US 1974-486180	19740705
US 4065500	A	19771227	US 1976-672428	19760331
US 4146558	A	19790327	US 1977-839975	19771006
US 4206144	A	19800603	US 1978-963031	19781122
PRIORITY APPLN. INFO.:			US 1966-551868	A2 19660523
			US 1968-777884	A2 19681121
			US 1970-51676	A2 19700701

L66 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 US 1970-51690 A2 19700701
 US 1971-201153 A2 19711122
 US 1973-332511 A2 19730214
 US 1974-486180 A2 19740705
 US 1966-531868 A2 19660304
 CA 1969-65436 A3 19691021
 US 1970-51673 A2 19700701
 US 1975-595864 A2 19750714
 US 1976-672428 A2 19760331
 US 1976-672482 A2 19760331
 US 1977-839975 A2 19771006

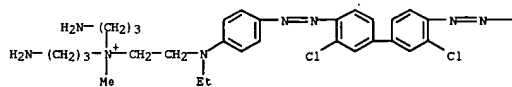
IT 68837-99-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling of, with tetrazotized bis(aminochlorophenyl) disulfide)
 RN 68837-99-0 CAPLUS
 CN 1-Propanaminium, 3-amino-N-(3-aminopropyl)-N-(2-(ethylphenylamino)ethyl)-N-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

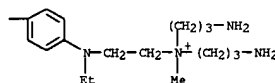
RL: RCT (Reactant); RACT (Reactant or reagent)
 (coupling of, with tetrazotized o-tolidine)
 IT 66755-02-0P 66755-07-5P 68838-00-6P
 68849-72-9P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 66755-02-0 CAPLUS
 CN 1-Propanaminium, N,N'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis[azo-4,1-phenylene(ethylimino)-2,1-ethanediyl]]bis[3-amino-N-(3-aminopropyl)-N-methyl-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A



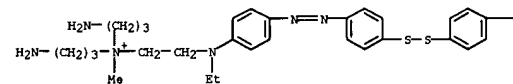
● 2 Cl⁻

L66 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 PAGE 1-B



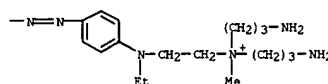
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 CN 1-Propanaminium, N,N'-[dithiobis[4,1-phenyleneazo-4,1-phenylene(ethylimino)-2,1-ethanediyl]]bis[N,N-bis(3-aminopropyl)-N-methyl-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A



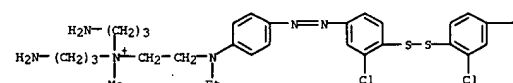
● 2 Cl⁻

PAGE 1-B



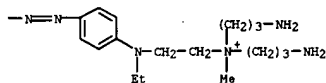
RN 68838-00-6 CAPLUS
 CN 1-Propanaminium, N,N'-[dithiobis[(3-chloro-4,1-phenylene)azo-4,1-phenylene(ethylimino)-2,1-ethanediyl]]bis[3-amino-N-(3-aminopropyl)-N-methyl-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A

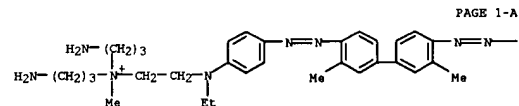


● 2 Cl⁻

PAGE 1-B



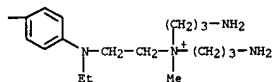
RN 68849-72-9 CAPLUS
CN 1-Propanaminium, N,N'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis[azo-4,1-phenylene(ethylimino)-2,1-ethanediyl]]bis[3-amino-N-(3-aminopropyl)-N-methyl-, chloride (9CI) (CA INDEX NAME)



PAGE 1-A

● 2 Cl⁻

PAGE 1-B



* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Approx. 100 cationic water-soluble azo and disazo dyes for paper were prepared which had good bleachability and good bleed-fastness properties. The dyes were prepared by conventional azo coupling techniques and the preparation of intermediates was extensively described. Representative of the dyes prepared are: I (R = R₁) [38901-94-9], II [40948-99-0], and III [66755-16-6].

ACCESSION NUMBER: 1978:512303 CAPLUS
DOCUMENT NUMBER: 89:112303
TITLE: Water-soluble quaternary ammonium dyes
INVENTOR(S): Jefferies, Patrick J.; Crounse, Nathan N.
PATENT ASSIGNEE(S): Sterling Drug Inc., USA
SOURCE: U.S., 77 pp. Continuation-in-part of U.S. 3,839,426.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3996282	A	19761207	US 1974-486180	19740705
US 3709903	A	19730109	US 1970-51676	19700701
US 3839426	A	19741001	US 1970-51690	19700701
GB 1333837	A	19731017	GB 1971-29451	19710622
CA 940528	A1	19740122	CA 1971-116474	19710623
US 3784599	A	19740108	US 1971-201153	19711122
US 3935182	A	19760127	US 1973-332511	19730214
CA 940121	A2	19740115	CA 1973-163853	19730216
US 4103092	A	19780725	US 1975-595864	19750714
US 4065500	A	19771227	US 1976-672428	19760331
US 4146558	A	19790327	US 1977-839975	19771006
US 4206144	A	19800603	US 1978-963031	19781122
PRIORITY APPLN. INFO.:			US 1966-551868	A2 19660523
			US 1968-777884	A2 19681121
			US 1970-51676	A2 19700701
			US 1970-51690	A2 19700701
			US 1971-201153	A2 19711122
			US 1973-332511	A2 19730214
			US 1966-531868	A2 19660304
			CA 1969-65436	A3 19691021
			US 1970-51673	A2 19700701
			US 1974-486180	A2 19740705
			US 1975-595864	A2 19750714
			US 1976-672428	A2 19760331
			US 1976-672482	A2 19760331
			US 1977-839975	A2 19771006

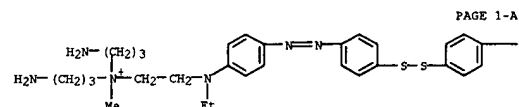
IT 66755-07-5P

RL: IMF (Industrial manufacture); PREP (Preparation)
(dye, preparation of)

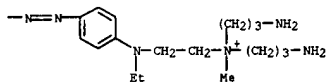
RN 66755-07-5 CAPLUS

CN 1-Propanaminium, N,N'-[dithiobis[4,1-phenyleneazo-4,1-

PAGE 1-B

● 2 Cl⁻

PAGE 1-B

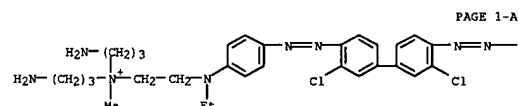


IT 66755-02-0P 66755-03-1P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(preparation and spectrum of)

RN 66755-02-0 CAPLUS

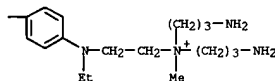
CN 1-Propanaminium, N,N'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis[azo-4,1-phenylene(ethylimino)-2,1-ethanediyl]]bis[3-amino-N-(3-aminopropyl)-N-methyl-, dichloride (9CI) (CA INDEX NAME)



PAGE 1-A

● 2 Cl⁻

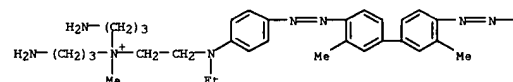
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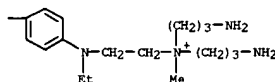
RN 66755-03-1 CAPLUS

CN 1-Propanaminium, N,N'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis[azo-4,1-phenylene(ethylimino)-2,1-ethanediyl]]bis[3-amino-N-(3-aminopropyl)-N-methyl-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A

● 2 Cl⁻

PAGE 1-B

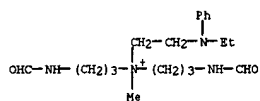


IT 66754-66-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

RN 66754-66-3 CAPLUS

CN 1-Propanaminium, N-[2-(ethylphenylamino)ethyl]-3-(formylamino)-N-[3-(formylamino)propyl]-N-methyl-, chloride (9CI) (CA INDEX NAME)

● Cl⁻

L66 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AB R2R1N+CH2CH2NEX- (I, R, R1 = H, alkyl; X = SO2, SO3) were prepared by reaction of NR2R1-SO2 or NR2R1-SO3 addition compds. with aziridine. Thus, 32 parts SO2 was passed into a solution containing 36.5 parts BuNH2 in 150 parts

CGH6 at 20-5° and 21.5 part aziridine added slowly at 30-40° to give 63.3% I (R = H, R1 = Bu, X = SO2). Similarly prepared were 17 other I.

ACCESSION NUMBER: 1971:509827 CAPLUS
 DOCUMENT NUMBER: 75:109827
 TITLE: Ammonium betaines
 INVENTOR(S): Distler, Harry; Widder, Rudi
 PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik AG
 SOURCE: Ger. Offen., 15 pp.
 CODEN: GWXXEX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

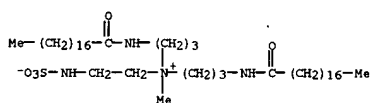
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1963399	A	19710624	DE 1969-1963399	19691218
US 3741998	A	19730626	US 1970-96270	19701208
NL 7018343	A	19710622	NL 1970-18343	19701216
FR 2073824	A5	19711001	FR 1970-45308	19701216
JP 48037019	B4	19731108	JP 1970-113159	19701218

PRIORITY APPLN. INFO.: DE 1969-1963399 A 19691218
 IT 32797-22-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 32797-22-1 CAPLUS

CN Ammonium, methylbis(3-stearamidopropyl)[2-(sulfoamino)ethyl]-, hydroxide, inner salt (8CI) (CA INDEX NAME)



=> fil reg
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
36.83	3058.30

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-5.11	-19.71

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DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

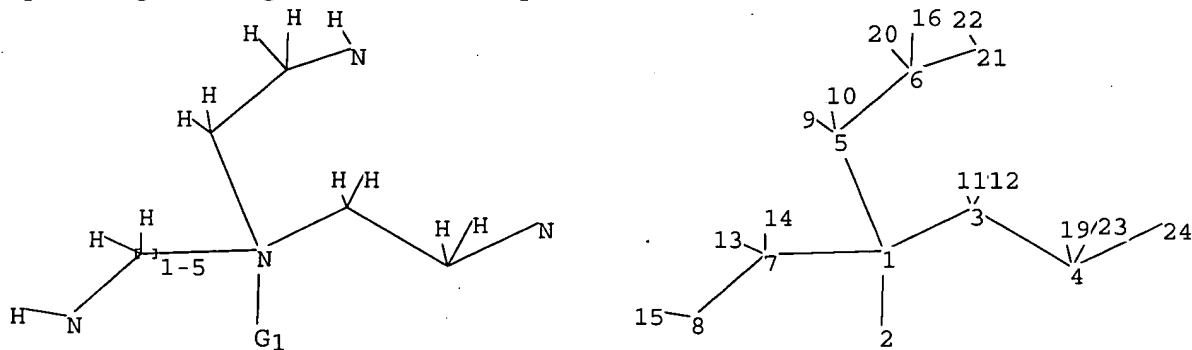
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conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>
Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24
 chain bonds :
 1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
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G1:C,H

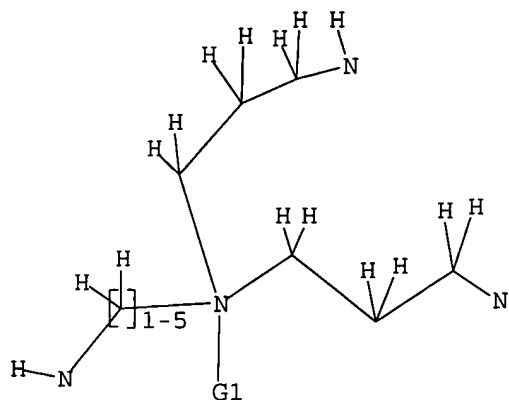
Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L67 STRUCTURE UPLOADED

=> d query

L67

STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 167

SAMPLE SEARCH INITIATED 17:49:05 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 4564 TO ITERATE

21.9% PROCESSED 1000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

2 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 87229 TO 95331

PROJECTED ANSWERS: 2 TO 363

L68 2 SEA SSS SAM L67

=> s 167 full

FULL SEARCH INITIATED 17:49:10 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 89427 TO ITERATE

100.0% PROCESSED 89427 ITERATIONS

49 ANSWERS

SEARCH TIME: 00.00.02

L69 49 SEA SSS FUL L67

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-19.71

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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17

FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 169

L70 42 L69

=> d 170 1-42 abs ibib hitstr

L70 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN

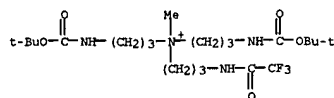
AB A method for delivering nucleic acids to parenchymal cells in a mammalian limb comprises inserting the nucleic acid into a blood vessel of the limb then applying pressure to impede fluid flow in the vessel. The method of insertion of the nucleic acid into the blood vessel results in an increased permeability of the blood vessel. Thus, fast injection of a large volume of liquid results in increased permeability. Fluid flow in the vessel may be impeded with a tourniquet or sphygmomanometer.

ACCESSION NUMBER: 2004:1127080 CAPLUS
DOCUMENT NUMBER: 142:79883
TITLE: Methods for intravascular delivery of non-viral nucleic acids
INVENTOR(S): Wolff, Jon A.; Budker, Vladimir G.; Hagstrom, James E.; Monahan, Sean D.; Rozema, David B.; Slattum, Paul M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 917,154.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 24
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004259828	A1	20041223	US 2004-838622	20040504
US 6265387	B1	20010724	US 1997-975573	19971121
US 2002001574	A1	20020103	US 1997-533	19971230
US 2001009904	A1	20010726	US 1998-70303	19980430
US 2001008882	A1	20010719	US 1999-391260	19990907
US 2001019723	A1	20010906	US 1999-450315	19991129
US 6379966	B2	20020430		
US 2002137707	A1	20020926	US 2001-917154	20010727
			US 1995-571536	B1 19951213
			US 1997-975573	A1 19971121
			US 1997-533	B2 19971230
			US 1998-70303	B2 19980430
			US 1999-391260	B2 19990907
			US 1999-450315	A2 19991129
			US 2000-707000	A2 20001105
			US 2000-707117	A2 20001106
			US 2001-917154	A2 20010727
			US 1995-5091P	P 19951011
			US 1999-121730P	P 19990226
			US 1999-146564P	P 19990730

IT 210292-23-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(methods for intravascular delivery of non-viral nucleic acids)
RN 210292-23-2 CAPLUS
CN 1-Propanaminium, N,N-bis[3-[[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-N-methyl-3-[(trifluoroacetyl)amino]-, bromide (9CI) (CA INDEX NAME)

L70 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● Br⁻

L70 ANSWER 2 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN

AB The process comprises designing a polynucleotide, such as an siRNA, for transfection. The polynucleotide is inserted into a mammalian vessel such as an artery. Prior to insertion, subsequent to insertion, or concurrent with insertion, volume in the vessel is increased allowing the polynucleotide delivery to the parenchymal cell. In one preferred embodiment, a process is described for delivering a polynucleotide into a parenchymal cell of a mammal, comprising making a polynucleotide such as a nucleic acid, then inserting the polynucleotide into a mammalian vessel (e.g. a blood vessel) and increasing the permeability of the vessel, finally delivering the polynucleotide to the parenchymal cell thereby altering endogenous properties of the cell. Increasing the permeability of the vessel consists of increasing pressure against vessel walls. Increasing the pressure consists of increasing a volume of fluid within the vessel. Increasing the volume consists of inserting the polynucleotide in a solution into the vessel wherein the solution contains a compound which complexes with the polynucleotide. Preparation of polymers (e.g. L-cystine-1,4-bis(3-aminopropyl)piperazine copolymer) complexable with polynucleotides is also included.

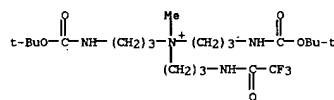
ACCESSION NUMBER: 2004:452925 CAPLUS
DOCUMENT NUMBER: 141:17570
TITLE: Intravascular delivery of nonviral nucleic acid
INVENTOR(S): Hagstrom, James E.; Wolff, Jon A.; Monahan, Sean D.; Rozema, David B.; Budker, Vladimir G.; Slattum, Paul M.; Lewis, David L.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 35 pp., Cont.-in-part of U.S. Ser. No. 447,966.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 24
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004106567	A1	20040603	US 2003-609938	20030630
US 2001008882	A1	20010719	US 1999-391260	19990907
US 2001004636	A1	20010621	US 1999-447966	19991123
US 6627616	B2	20030930		
WO 2005009476	A1	20050203	WO 2003-US25737	20030818

W: JP
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR
PRIORITY APPLN. INFO.:
US 1999-391260 A2 19990907
US 1999-447966 A2 19991123
US 1995-571536 A 19951213
US 1997-975573 A1 19971121
US 2003-609938 A 20030630

IT 210292-23-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(intravascular delivery of nonviral nucleic acid)
RN 210292-23-2 CAPLUS
CN 1-Propanaminium, N,N-bis[3-[[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-N-methyl-3-[(trifluoroacetyl)amino]-, bromide (9CI) (CA INDEX NAME)

L70 ANSWER 2 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● Br⁻

L70 ANSWER 3 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB A process is described for the delivery of a therapeutic polynucleotide to a tissue suffering from or potentially suffering from ischemia. The process comprises designing a polynucleotide for transfection. Then the polynucleotide is inserted into a mammalian vessel such as an artery or a vein. Prior to insertion, subsequent to insertion, or concurrent with insertion the volume of the tissue is increased such that the genetic material is delivered to the parenchymal cell.

ACCESSION NUMBER: 2004:310827 CAPLUS
 DOCUMENT NUMBER: 140:344873
 TITLE: Intravascular delivery of non-viral nucleic acid
 INVENTOR(S): Wolff, Jon A.; Monahan, Sean D.; Hagstrom, James E.; Rozema, David B.; Budker, Vladimir G.; Slattum, Paul M.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 30 pp., Cont.-in-part of U.S. Pat. Appl. 2001 4,636.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 24
 PATENT INFORMATION:

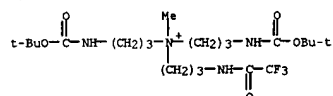
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US 2004072785	A1	20040415	US 2003-628734	20030728
US 2001004636	A1	20010621	US 1999-447966	19991123
US 6627616	B2	20030930		
WO 2005016355	A1	20050224	WO 2003-US35460	20031105

W: JP
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR

PRIORITY APPLN. INFO.:
 US 1999-447966 A2 19991123
 US 1995-571536 A 19951213
 US 1997-975573 A 19971121
 US 2003-628734 A 20030728

IT 210292-23-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intravascular delivery of non-viral nucleic acid)

RN 210292-23-2 CAPLUS
 CN 1-Propanaminium, N,N-bis[3-[[[1,1-dimethylethoxy]carbonyl]amino]propyl]-N-methyl-3-[(trifluoroacetyl)amino]-, bromide (9CI) (CA INDEX NAME)



● Br⁻

L70 ANSWER 5 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB A plant protection formulation contains at least one Cu²⁺-containing compound as an active ingredient, characterized in that the active ingredient comprises an amount of at least one chelate of Cu²⁺ with a polyamine compound

ACCESSION NUMBER: 2003:715744 CAPLUS
 DOCUMENT NUMBER: 139:241667
 TITLE: Plant protection formulation containing a copper-polyamine chelate
 INVENTOR(S): Camerlynck, Rudiger; De Potter, Pierre
 PATENT ASSIGNEE(S): RMS Micro-Nutrients N. V., Belg.
 SOURCE: Eur. Pat. Appl., 14 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

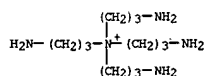
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1342413	A1	20030910	EP 2002-447035	20020308

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

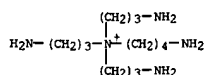
PRIORITY APPLN. INFO.:
 EP 2002-447035 20020308

IT 111216-37-6D, copper chelates 143085-76-1D, copper chelates
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
 (plant protection formulation containing)

RN 111216-37-6 CAPLUS
 CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



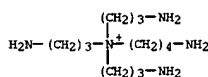
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of newly isolated acidophilic, thermophilic and thermoacidophilic archaeobacteria were investigated for the chemotaxonomic significance of polyamine distribution profiles. In addition to spermidine, spermine and agmatine, a quaternary branched penta-amine, N⁴-bis(aminopropyl)spermidine, was found in thermophilic Thermococcus waiotapuensis, Thermococcus agassizii and Pyrococcus glycovorans belonging to the order Thermococcales. An acidophilic euryarchaeon, Ferroplasma acidiphilum located in the order Thermoplasmatales, contained spermidine and agmatine. Norspermidine, spermidine, norspermine and spermine were found in thermoacidophilic Acidilobus acetatus and thermophilic Thermodiscus maritimus located in the order Desulfurococcales, and in thermophilic Pyrococcus arsenaticus, Pyrococcus oguniense, Vulcanisaeta distributa and Vulcanisaeta sonnians belonging to the order Thermoproteales; however, the four genera differ on their tetra- and penta-amine levels. The thermophilic Staphylothermus hellenicus belonging to Desulfurococcales contained caldopentamine, caldoxamine and N¹-acetylcaldopentamine in addition to norspermidine, spermidine and norspermine. This is the first report on the occurrence of acetylated penta-amine in nature.

ACCESSION NUMBER: 2004:69144 CAPLUS
 DOCUMENT NUMBER: 141:274078
 TITLE: Cellular polyamines of the acidophilic, thermophilic and thermoacidophilic archaeobacteria, Acidilobus, Ferroplasma, Pyrococcus, Staphylothermus, Thermococcus, Thermodiscus and Vulcanisaeta
 AUTHOR(S): Hamana, Koei; Tanaka, Takehiko; Hosoya, Ryuichi; Niitsu, Masaru; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Maebashi, 371-8514, Japan
 SOURCE: Journal of General and Applied Microbiology (2003), 49(5), 287-293
 CODEN: JGAMAS; ISSN: 0022-1260
 PUBLISHER: Microbiology Research Foundation
 DOCUMENT TYPE: Journal
 LANGUAGE: English

IT 143085-76-1, N⁴-Bis(aminopropyl)spermidine
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (polyamines in relation to taxonomy of archaeobacteria)

RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 6 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Disclosed is a complex for providing nucleic acid expression in a cell. A polynucleotide and a polymer are mixed together to form the complex wherein the zeta potential of the complex is not pos. Then the complex is delivered to the cell wherein the nucleic acid is expressed. E.g., 5,5'-dithiobis(2-nitrobenzoic acid)-tetraethylenepentamine copolymer was prepared and DNA complexes of this polymer were injection into mouse tail and plasmid DNA was release from the complex and was accessible for transcription.

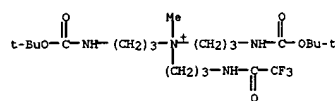
ACCESSION NUMBER: 2003:696467 CAPLUS
 DOCUMENT NUMBER: 139:235406
 TITLE: Polynucleotide complex delivery
 INVENTOR(S): Monahan, Sean D.; Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Rozema, David B.; Slattum, Paul M.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 450,315.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 24
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003166280	A1	20030904	US 2002-85378	20020227
US 2001019723	A1	20010906	US 1999-450315	19991129
US 6379966	B2	20020430		

PRIORITY APPLN. INFO.:
 US 1999-450315 A2 19991129
 US 1999-121730P P 19990226
 US 1999-146564P P 19990730

IT 210292-23-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (polynucleotide complex delivery)

RN 210292-23-2 CAPLUS
 CN 1-Propanaminium, N,N-bis[3-[[[1,1-dimethylethoxy]carbonyl]amino]propyl]-N-methyl-3-[(trifluoroacetyl)amino]-, bromide (9CI) (CA INDEX NAME)



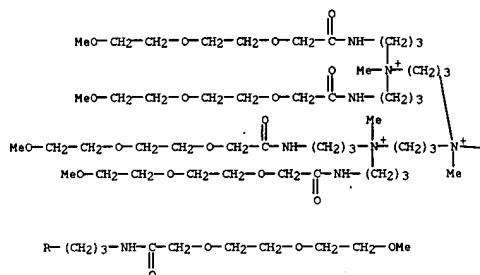
● Br⁻

L70 ANSWER 7 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Poly(propylene imine) dendrimers DAB-dendr-(NH₂)₈, DAB-dendr-(NH₂)₃₂, and DAB-dendr-(NH₂)₆₄ were fully converted with iodomethane to quaternary ammonium ions at both chain ends and branch points and, using less iodomethane, partially converted to quaternary ammonium ions mainly at end groups. Amidation of the primary amine ends followed by treatment with iodomethane gave the first dendrimers with quaternary ammonium ions only at branch points. After exchange of iodide counterions for chloride, all of the quaternary ammonium ion dendrimers slightly increased the rate of decarboxylation of 6-nitrobenzoxazole-3-carboxylate ion in aqueous solution. Similar quaternary ammonium ion dendrimers having more hydrophobic interiors or more hydrophobic chains on the ends were much more active catalysts for the decarboxylation.

ACCESSION NUMBER: 2003:381155 CAPLUS
 DOCUMENT NUMBER: 138:338679
 TITLE: Quaternary ammonium ion dendrimers as catalytic media
 AUTHOR(S): Kreider, Jason L.; Ford, Warren T.
 CORPORATE SOURCE: Dep. of Chem., Oklahoma State Univ., Stillwater, OK, 74078, USA
 SOURCE: Polymeric Materials Science and Engineering (2001), 84, 156-157
 CODEN: PMSEGG; ISSN: 0743-0515
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 339591-28-5P
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (quaternization of com. polyamine dendrimers and utilization of quaternary ammonium ion dendrimers as catalysts for decarboxylation of 6-nitrobenzoxazole-3-carboxylate)

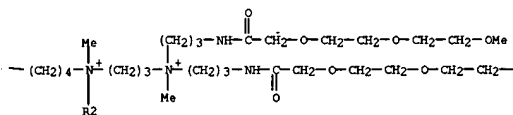
RN 339591-28-5 CAPLUS
 CN 1,4-Butanediaminium, N,N,N',N'-tetrakis[3-[[bis[3-[[[2-(2-methoxyethoxy)ethoxy]acetyl]amino]propyl]methylammonio]propyl]-N,N'-dimethyl-, hexaiodide (9CI) (CA INDEX NAME)

PAGE 1-A



L70 ANSWER 7 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

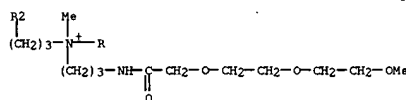
PAGE 1-B



PAGE 1-C

—OMe

PAGE 2-A



● 6 I-

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
 AB A method for improving the efficiency of in vitro transcription system using polyamines isolated from thermophilic bacteria, is disclosed. RNA polymerase of T7 phage, T3 phage, SP6 phage, or K11 phage is mixed with promoter-containing template DNA. A significant improvement (2 fold at 37°C and 6.5 - 7.5 fold at 60°C) of the effectiveness of the in vitro transcription with addition of tetrakis(3-aminopropyl)ammonium and caldopentamine, was demonstrated.

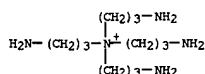
ACCESSION NUMBER: 2003:344387 CAPLUS
 DOCUMENT NUMBER: 138:349676
 TITLE: RNA polymerase activation and improvement of in vitro transcription by polyamines
 INVENTOR(S): Kitamura, Nobuo; Yoneda, Sukeyasu; Oshima, Yasuo; Watahiki, Masanori
 PATENT ASSIGNEE(S): Nippon Gene Tech K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXKAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003125767	A2	20030507	JP 2001-325016	20011023

PRIORITY APPLN. INFO.: JP 2001-325016 20011023

IT 111216-37-6
 RL: RSU (Biological study, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
 (RNA polymerase activation and improvement of in vitro transcription by polyamines)

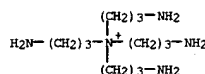
RN 111216-37-6 CAPLUS
 CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



IT 521061-52-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (RNA polymerase activation and improvement of in vitro transcription by polyamines)

RN 521061-52-9 CAPLUS
 CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)-, chloride (9CI) (CA INDEX NAME)

L70 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● Cl-

L70 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN

AB Disclosed is a system for providing nucleic acid expression in a cell. A polynucleotide is inserted into a mammalian vasculature. The vessel permeability is increased and the polynucleotide is delivered to the cell where it enhances the endogenous properties of the cell. DNA and a polymer (L-cystine-1,3-bis(3-aminopropyl)pyrrolazine copolymer) were mixed at a 1:1.7 wtwt ratio in water and diluted to 2.5 mL with Ringers solution. Complexes were injected into tail vein of 25 g ICR mice within 7 s. Mice were sacrificed 24 h after injection and various organs were assayed for luciferase expression.

ACCESSION NUMBER: 2002:736887 CAPLUS
DOCUMENT NUMBER: 137:268433
TITLE: Intravascular delivery of non-viral nucleic acid
INVENTOR(S): Monahan, Sean D.; Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Rozema, David B.; Slattum, Paul M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 41 pp., Cont.-in-part of U.S. 6,379,966.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 24
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002137707	A1	20020926	US 2001-917154	20010727
US 2002001574	A1	20020103	US 1997-533	19971230
US 2001009904	A1	20010726	US 1998-70303	19980430
US 2001008882	A1	20010719	US 1999-391260	19990907
US 2001019723	A1	20010906	US 1999-450315	19991129
US 6379966	B2	20020430		
US 2003143204	A1	20030731	US 2002-186757	20020701
US 2004259828	A1	20041223	US 2004-838622	20040504
PRIORITY APPLN. INFO.:			US 1997-533	B2 19971230
			US 1998-70303	B2 19980430
			US 1999-391260	A2 19990907
			US 1999-450315	A2 19991129
			US 1995-571536	B1 19951213
			US 1997-975573	A1 19971121
			US 1999-121730P	P 19990226
			US 1999-146564P	P 19990730
			US 2000-707000	A2 20001105
			US 2000-707117	A2 20001106
			US 2001-917154	A2 20010727
			US 2001-315394P	P 20010827
			US 2001-324155P	P 20010920

IT 210292-23-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intravascular delivery of non-viral nucleic acid)

RN 210292-23-2 CAPLUS
CN 1-Propanaminium, N,N-bis[3-[[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-N-methyl-3-[(trifluoroacetyl)amino]-, bromide (9CI) (CA INDEX NAME)

L70 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN

AB Polymers are formed in the presence of nucleic acid using template polymerization.
Also, polymerization occur in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. For example, step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

ACCESSION NUMBER: 2002:41634 CAPLUS
DOCUMENT NUMBER: 136:107515
TITLE: Polymer formation in presence of nucleic acid using template polymerization
INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetskoy, Vladimir S.; Slattum, Paul M.; Hanson, Lisa J.
PATENT ASSIGNEE(S): Mirus Corp., USA
SOURCE: U.S., 26 pp., Cont.-in-part of U.S. Ser. No. 778,657.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

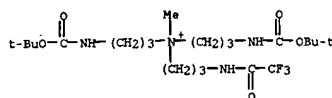
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6339067	B1	20020115	US 1997-692	19971230
US 6126964	A	20001003	US 1997-778657	19970103
US 2001024829	A1	20010927	US 2001-753990	20010102
US 6383811	B2	20020507		
US 2002165184	A1	20021107	US 2001-993216	20011116
US 6706922	B2	20040316		
US 2002061287	A1	20020523	US 2001-4763	20011205
US 2002085989	A1	20020704	US 2001-5294	20011205
US 2004161463	A1	20040819	US 2004-755785	20040112
PRIORITY APPLN. INFO.:			US 1997-778657	A2 19970103
			US 1996-9593P	P 19960104
			US 1997-692	A2 19971230
			US 1999-464871	A3 19991216
			US 1999-174132P	P 19991231
			US 2001-993216	A3 20011116

IT 389132-33-6P
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

RN 389132-33-6 CAPLUS
CN 2-Propanoic acid, 2-methyl-, polymer with dimethyl 3,3'-dithiobis[propanimidate] and $\alpha,\alpha',\alpha'',\alpha'''$ -(1,3-propanediylbis[[(2-aminoethyl)nitrido]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]])tetrakis[α -hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2), sodium salt (9CI) (CA INDEX NAME)

CN 1

L70 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



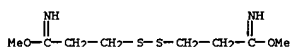
Br⁻

L70 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 389132-32-5
CMF (C8 H16 N2 O2 S2 . C4 H6 O2 . (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2)x
CCI PMS

CM 2

CRN 59012-54-3
CMF C8 H16 N2 O2 S2



CM 3

CRN 79-41-4
CMF C4 H6 O2



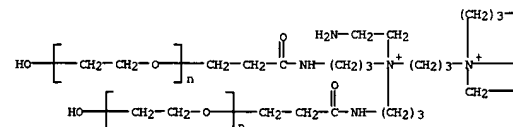
CM 4

CRN 210292-30-1
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2

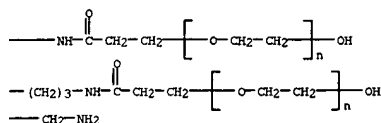
CM 5

CRN 210292-29-8
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
CCI PMS

PAGE 1-A



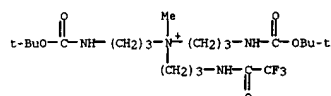
PAGE 1-B



CM 6

CRN 14477-72-6
CMF C2 F3 O2IT 210292-23-2P 210292-24-3P 210292-26-5P
210292-28-7P 210292-30-1PRL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(polymer formation in presence of nucleic acid using template
polymerization)

RN 210292-23-2 CAPLUS

CN 1-Propanaminium, N,N-bis[3-[[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-N-
methyl-3-[(trifluoroacetyl)amino]-, bromide (9CI) (CA INDEX NAME)● Br⁻

RN 210292-24-3 CAPLUS

CN 1-Propanaminium, 3-amino-N,N-bis[3-[[[(1,1-dimethylethoxy)carbonyl]amino]pr
opyl]-N-methyl-, bromide (9CI) (CA INDEX NAME)

RN 210292-30-1 CAPLUS

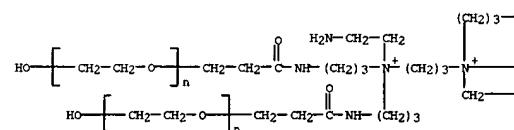
CN Poly(oxy-1,2-ethanediyl), α,α',α'',α'''-[1,3-
propanediylbis[[[(2-aminoethyl)nitrilo]bis[3,1-propanediylimino(3-oxo-3,1-
propanediyl)]]]tetrakis[α-hydroxy-, salt with trifluoroacetic acid
(1:2) (9CI) (CA INDEX NAME)

CM 1

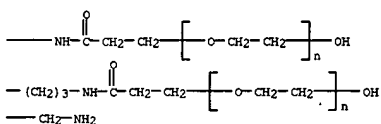
CRN 210292-29-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
CCI FMS

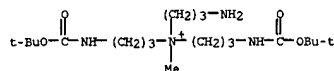
PAGE 1-A



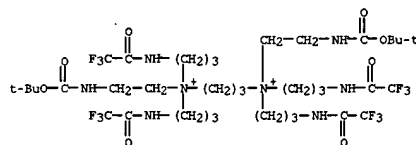
PAGE 1-B



CM 2

CRN 14477-72-6
CMF C2 F3 O2● Br⁻

RN 210292-26-5 CAPLUS

CN 1,3-Propanediaminium, N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethy
l]-N,N,N',N'-tetrakis[3-[(trifluoroacetyl)amino]propyl]-, dibromide (9CI)
(CA INDEX NAME)● 2 Br⁻

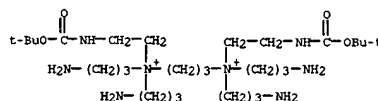
RN 210292-28-7 CAPLUS

CN 1,3-Propanediaminium, N,N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[[(1,1-
dimethylethoxy)carbonyl]amino]ethyl]-, salt with trifluoroacetic acid
(1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 210292-27-6

CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6

CMF C2 F3 O2



IT 389132-31-4P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
(polymer formation in presence of nucleic acid using template
polymerization)

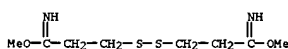
RN 389132-31-4 CAPLUS

CN Propanimidic acid, 3,3'-dithiobis-, dimethyl ester, polymer with
N,N'-bis[2-aminoethyl]-1,3-propanediamine and
α,α',α'',α'''-[1,3-propanediylbis[[[(2-
aminoethyl)nitrilo]bis[3,1-propanediylimino(3-oxo-3,1-
propanediyl)]]]tetrakis[α-hydroxy]poly(oxy-1,2-ethanediyl)] salt with
trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 59012-54-3

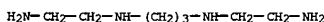
CMF C8 H16 N2 O2 S2



CM 2

CRN 4741-99-5

CMF C7 H20 N4



CM 3

CRN 210292-30-1

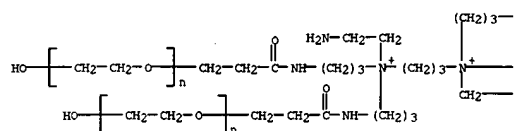
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O2

CM 4

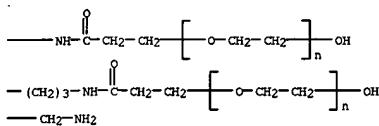
CRN 210292-29-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
CCI FMS

PAGE 1-A



PAGE 1-B



CM 5

CRN 14477-72-6
CMF C2 F3 O2

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Cellular polyamines of 4 new thermophiles located in 3 early branched subbacterial clades, were investigated for the chemotaxonomic significance of polyamine distribution profiles. The thermophilic anaerobic Thermosipho japonicus, belonging to the order Thermotogales, contained norspermidine, norspermine and thermospermine in addition to spermidine and spermine. The polyamine profile was identical to the polyamine composition of

Thermotoga, Fervidobacterium and Petrotoga species of the order. Spermidine, norspermidine, spermine, N4-bis(aminopropyl)spermidine and agmatine were found in thermophilic aerobic Thermoerobacter marianensis. Some differences were observed in the polyamine compns. of the phylogenetically related thermophilic anaerobes, Moorella, Dictyoglomus, Thermoanaerobacterium and Thermoanaerobacter species. Thermophilic anaerobic C. kristjanssonii and C. owensensis contained a linear penta-amine, thermopentamine, and 2 quaternary branched penta-amines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine, as the major polyamines. A novel tertiary branched penta-amine, N4-aminopropylspermine, was found in the 2 Caldicellulosiruptor species.

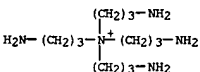
ACCESSION NUMBER: 2001:329885 CAPLUS
DOCUMENT NUMBER: 135:58231
TITLE: Polyamines of the thermophilic eubacteria belonging to the genera Thermosipho, Thermoerobacter and Caldicellulosiruptor
AUTHOR(S): Hamana, Koei; Niitsu, Masaru; Samejima, Keiji; Itoh, Takashi
CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
SOURCE: Microbios (2001), 104(409), 177-185
CODEN: MCBIA7; ISSN: 0026-2633
PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 111216-37-6 143085-76-1

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(polyamines of Thermosipho, Thermoerobacter and Caldicellulosiruptor)

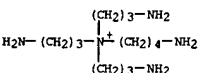
RN 111216-37-6 CAPLUS

CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-76-1 CAPLUS

CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS

AB Disclosed is a process for transfecting genetic material into a mammalian cell to alter endogenous properties of the cell. The process comprises designing a polynucleotide for transfection. Then the polynucleotide is inserted into a mammalian vessel such as a tail vein or artery. Prior to insertion, subsequent to insertion, or concurrent with insertion the permeability of the vessel is increased thereby the genetic material is delivered to the parenchymal cell altering endogenous properties of the cell. The naked polynucleotide is complexed prior to delivery with amphipathic compds., polymers, or other nonviral vectors. Syntheses are described for the preparation of several activated disulfide-containing

co-monomers and of pH-cleavable polymers for intracellular compartment release.

ACCESSION NUMBER: 2001:453489 CAPLUS

DOCUMENT NUMBER: 135:41003

TITLE: Intravascular delivery of non-viral nucleic acid

INVENTOR(S): Monahan, Sean D.; Wolf, Jon A.; Slatum, Paul M.;

Hagstrom, James E.; Budker, Vladimir G.; Rozema, David B.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

PATENT INFORMATION:

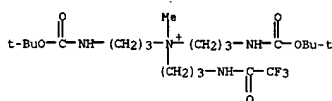
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20010004636 A1		20010621	US 1999-447966	19991123

IT 210292-23-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intravascular delivery of non-viral nucleic acid)

RN 210292-23-2 CAPLUS

CN 1-Propanaminium, N,N-bis[3-[[[1,1-dimethylethoxy]carbonyl]amino]propyl]-N-methyl-3-[[trifluoroacetyl]amino]-, bromide (9CI) (CA INDEX NAME)

● Br⁻

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Substituted succinic acid metallo-β-lactamase inhibitors are provided which are useful potentiators of β-lactam antibiotics. Accordingly, the invention provides a method of treating bacterial infections in animals or humans which comprises administering, together with a β-lactam antibiotic, a therapeutically effective amount of a succinic acid derivative of the invention, or a pharmaceutically acceptable salt, prodrug, anhydride, or solvate thereof.

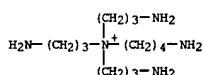
ACCESSION NUMBER: 2001:319661 CAPLUS
 DOCUMENT NUMBER: 134:336203
 TITLE: Substituted succinic acid metallo-β-lactamase inhibitors, their preparation, and their use in treating bacterial infections
 INVENTOR(S): Balkovec, James M.; Greenlee, Mark L.; Olson, Steven H.; Rouen, Gregory P.
 PATENT ASSIGNEE(S): Merck & Co., Inc., USA
 SOURCE: FCT Int. Appl., 129 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001030149	A1	20010503	WO 2000-US29707	20001027
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CP, CG, CI, CN, CW, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6630510	B1	20031007	US 2000-697415	20001026
CA 2388076	AA	20010503	CA 2000-2388076	20001027
EP 1227721	A1	20020807	EP 2000-975454	20001027
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003527332	T2	20030916	JP 2001-532588	20001027
AU 771274	B2	20040318	AU 2001-13504	20001027
US 2003078418	A1	20030424	US 2002-99790	20020315
US 2003027859	A1	20031106	US 2003-339043	20030109
PRIORITY APPLN. INFO.: US 1999-162370P P 19991028				
US 2000-697415 A3 20001026				
WO 2000-US29707 W 20001027				

OTHER SOURCE(S): MARPAT 134:336203
 IT 337906-80-6
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (succinic acid derivative metallo-β-lactamase inhibitors, preparation, and use in treating bacterial infections)
 RN 337906-80-6 CAPLUS
 CN [1,1'-Biphenyl]-4-methanaminium, N,N,N-tris(3-aminopropyl)-4'-[(2S,3S)-2,3-dicarboxy-4-phenylbutyl]-, chloride, trihydrochloride (9CI) (CA INDEX NAME)

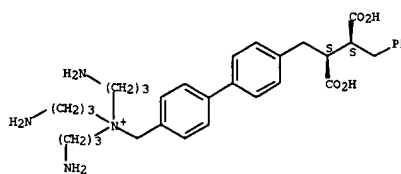
L70 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of eight new thermophilic archaeobacteria were investigated to determine the chemotaxonomic significance of polyamine distribution profiles. Hyperthermophilic Caldigras maquilensis belonging to the family Thermoproteaceae of the Crenarchaeota have a unique polyamine profile comprising spermidine, norspermidine and norspermine as the major polyamines. Within the order Thermococcales of the Euryarchaeota, the major polyamines of an extremely thermophilic terrestrial species of Thermococcus, T. zilligii, were spermidine and agmatine, whereas hyperthermophilic submarine species of Thermococcus and hyperthermophilic submerine Palaeococcus ferrophilus contained a quaternary branched penta-amine, N4-bis(aminopropyl)spermidine, as a major polyamine. A hyperthermophilic methanogen, Methanothermobacter sociabilis, belonging to Euryarchaeota, contained spermidine and spermine as the major polyamine.

ACCESSION NUMBER: 2001:186968 CAPLUS
 DOCUMENT NUMBER: 134:323232
 TITLE: Polyamines of the hyperthermophilic archaeobacteria belonging to the genera Thermococcus and Methanothermobacter and two new genera Caldigras and Palaeococcus
 AUTHOR(S): Hamana, Koei; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
 SOURCE: Microbios (2001), 104(408), 105-114
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (polyamines of archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
 Absolute stereochemistry.



● Cl⁻

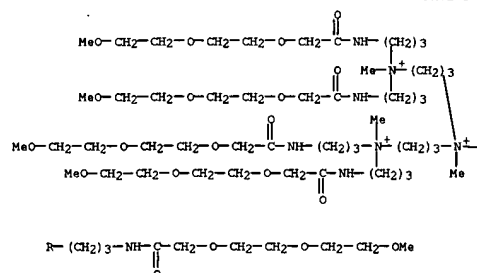
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REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

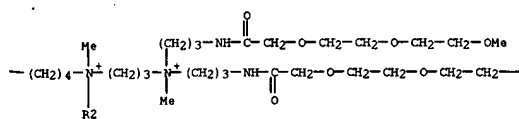
L70 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB The poly(propylene imine) dendrimers DAB-dendr-(NH2)8, DAB-dendr-(NH2)32, and DAB-dendr-(NH2)64 were fully converted with iodomethane to quaternary ammonium ions at both chain ends and branch points and, with less iodomethane, were partially converted to quaternary ammonium ions mainly at end groups. Amidation of the primary amine ends followed by treatment with iodomethane gave the first dendrimers with quaternary ammonium ions only at branch points. After an exchange of iodide counterions for chloride, all of the quaternary ammonium ion dendrimers slightly increased the rate of decarboxylation of 6-nitrobenzoxazole-3-carboxylate ion in an aqueous solution. Similar quaternary ammonium ion dendrimers with more hydrophobic interiors or more hydrophobic chains on the ends were much more active catalysts for the decarboxylation.

ACCESSION NUMBER: 2001:186594 CAPLUS
 DOCUMENT NUMBER: 134:367338
 TITLE: Quaternary ammonium ion dendrimers from methylation of poly(propylene imine)s
 AUTHOR(S): Kreider, Jason L.; Ford, Warren T.
 CORPORATE SOURCE: Department of Chemistry, Oklahoma State University, Stillwater, OK, 74078, USA
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2001), 39(6), 821-832
 CODEN: JPACJC; ISSN: 0887-624X
 PUBLISHER: John Wiley & Sons, Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 339591-34-3
 RL: CAT (Catalyst use); USES (Uses)
 (quaternary ammonium ion dendrimers from methylation of poly(propylene imine)s)
 RN 339591-34-3 CAPLUS
 CN 1,4-Butanediolaminium, N,N,N',N'-tetrakis[3-bis[3-[[[2-(2-methoxyethoxy)ethoxy]acetyl]amino]propyl]methylammonio]propyl]-N,N'-dimethyl-, hexachloride (9CI) (CA INDEX NAME)

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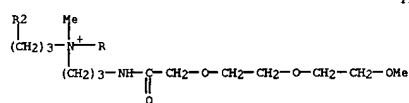


PAGE 1-B



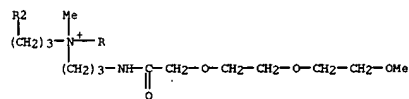
PAGE 1-C

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● 6 Cl⁻

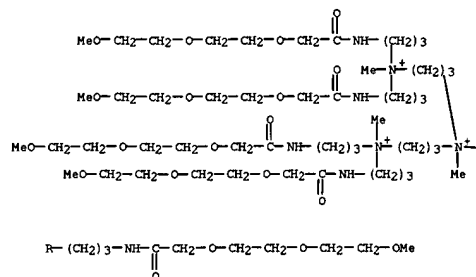
IT 339591-28-5P
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)
 (quaternary ammonium ion dendrimers from methylation of poly(propylene
 imine)s)
 RN 339591-28-5 CAPLUS
 CN 1,4-Butanediaminium, N,N,N',N'-tetrakis[3-[[bis[3-[[[2-(2-
 methoxyethoxy)ethoxy]acetyl]amino]propyl]methyllummonio]propyl]-N,N'-
 dimethyl-, hexalodide (9CI) (CA INDEX NAME)

PAGE 2-A

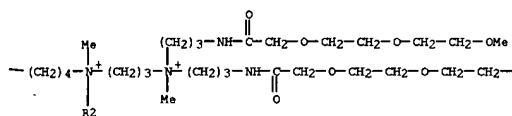
● 6 I⁻

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

PAGE 1-A



PAGE 1-B



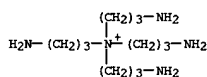
PAGE 1-C

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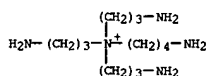
L70 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines were identified in a thermophilic, sulfide-oxidizing bacterium.
 Comparable polyamines were found in Aquifex, Hydrogenobacter, and
 Caldorobacterium.

ACCESSION NUMBER: 2001:30292 CAPLUS
 DOCUMENT NUMBER: 134:204849
 TITLE: Occurrence of quaternary branched penta-amines in a
 large sausage-shaped thermophilic sulfide-oxidizing
 bacterium predominated in hot spring sulfur-turf
 bacterial mats
 AUTHOR(S): Hamana, Koei; Kato, Kenji
 CORPORATE SOURCE: School of Health Sciences, Faculty of Medicine, Gunma
 University, Maebashi, 371-8514, Japan
 SOURCE: Journal of General and Applied Microbiology (2000),
 46(3), 179-182
 CODEN: JGAMA9; ISSN: 0022-1260
 PUBLISHER: Microbiology Research Foundation
 DOCUMENT TYPE: Journal
 LANGUAGE: English

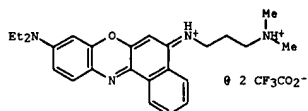
IT 111216-37-6 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (polyamines in large sausage-shaped thermophilic sulfide-oxidizing
 bacterium from hot spring sulfur-turf bacterial mats)
 RN 111216-37-6 CAPLUS
 CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



AB Red-emitting, fluorescent [8,9]benzophenoxazine dyes are prepared that are useful for staining nucleic acids in a variety of contexts, including in solns., in electrophoretic gels or other matrices, in blotting expts. and in assays employing intact, live cells. The new dyes are brighter and permeate cells faster than currently available red-emitting live-cell nucleic acid stains. Thus, Nile Blue chloride was suspended in water, neutralized with NaOH, extracted with CH2Cl2, and dried. The dried basic

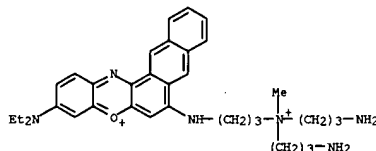
Nile Blue was treated with 1,3-dilodopropane and N,N,N',N'-tetramethyl-1,3-diaminopropane to give a mixture containing I.
ACCESSION NUMBER: 2000:769107 CAPLUS
DOCUMENT NUMBER: 133:336548
TITLE: Preparation of red-emitting [8,9]benzophenoxazine dyes and their use in staining of nucleic acids

INVENTOR(S): Yan, Xiongwei; Miragila, Sheri; Yuan, Pau Miao
PATENT ASSIGNEE(S): PE Corporation, USA
SOURCE: U.S., 20 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6140500	A	20001031	US 1999-389918	19990903
CA 2382593	AA	20010315	CA 2000-2382593	20000901
WO 2001018124	A1	20010315	WO 2000-US24057	20000901
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1208160	A1	20020529	EP 2000-959749	20000901
EP 1208160	B1	20031119		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
AU 753608	B2	20021024	AU 2000-71015	20000901
JP 2003509528	T2	20030311	JP 2001-52239	20000901
AT 254648	E	20031215	AT 2000-959749	20000901

OTHER SOURCE(S): MARPAT 133:336548
IT 303958-48-7P
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dye; preparation of red-emitting [8,9]benzophenoxazine dyes for staining of nucleic acids)
RN 303958-48-7 CAPLUS
CN Naphtho[2,3-a]phenoxazin-5-ium, 7-[[3-bis(3-aminopropyl)methylammonio]propyl]amino]-3-(diethylamino)-, conjugate diacid (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Disclosed is a process for transfecting genetic material into a mammalian cell to alter endogenous properties of the cell. The process comprises designing a polynucleotide for transfection. Then the polynucleotide is inserted into a mammalian vessel such as a tail vein or artery. Prior to insertion, subsequent to insertion, or concurrent with insertion the permeability of the vessel is increased thereby the genetic material is delivered to the parenchymal cell altering endogenous properties of the cell. The naked polynucleotide is complexed prior to delivery with amphipathic compds., polymers, or other nonviral vectors. Syntheses are described for the preparation of several activated disulfide-containing co-monomers

and of pH-cleavable polymers for intracellular compartment release.

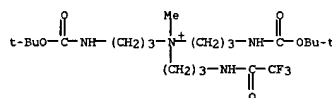
ACCESSION NUMBER: 2000:608924 CAPLUS
DOCUMENT NUMBER: 133:203820
TITLE: Intravascular delivery of non-viral nucleic acid
INVENTOR(S): Wolff, Jon A.; Monahan, Sean D.; Hagstrom, James E.; Slatum, Paul M.; Budker, Vladimir G.; Rozema, David B.

PATENT ASSIGNEE(S): Mirus Corp., USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 24
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050617	A1	20000831	WO 2000-US4521	20000222
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1161547	A1	20011212	EP 2000-911912	20000222
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.: US 1999-121730P P 19990226				
US 1999-146564P P 19990730				
WO 2000-US4521 W 20000222				

IT 210292-23-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(chemical synthesis of polymers for DNA complexation; intravascular delivery of non-viral nucleic acid)
RN 210292-23-2 CAPLUS
CN 1-Propanaminium, N,N-bis[3-[[[1,1-dimethylethoxy]carbonyl]amino]propyl]-N-methyl-3-[[trifluoroacetyl]amino]-, bromide (9CI) (CA INDEX NAME)

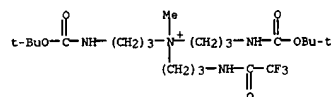


REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Polymers are formed in the presence of nucleic acid using template polymerization
 Also, polymerization occurs in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. Step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

ACCESSION NUMBER: 1999:708870 CAPLUS
 DOCUMENT NUMBER: 131:327545
 TITLE: Polymer formation in the presence of nucleic acid using template polymerization
 INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.
 PATENT ASSIGNEE(S): Mirus Corporation, USA
 SOURCE: PCT Int. Appl., 73 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955825	A1	19991104	WO 1999-US8965	19990423
W: JP RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1073707	A1	20010207	EP 1999-920014	19990423
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				
PRIORITY APPLN. INFO.: US 1998-70299 A 19980430 WO 1999-US8965 W 19990423				
IT 210292-23-2P 210292-24-3P 210292-26-5P 210292-28-7P 210292-30-1P RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (polymer formation in the presence of nucleic acid using template polymerization)				
RN 210292-23-2 CAPLUS CN 1-Propanediamine, N,N'-bis[3-[[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-N-methyl-3-[[trifluoroacetyl]amino]-, bromide (9CI) (CA INDEX NAME)				



● Br⁻

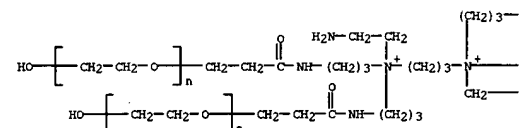
L70 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
 CM 2
 CRN 14477-72-6
 CMF C2 F3 O2



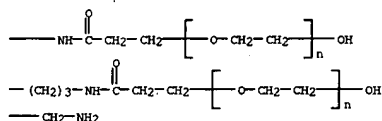
RN 210292-30-1 CAPLUS
 CN Poly(oxy-1,2-ethanediyl), α,α',α'',α'''-[1,3-propanediylbis[[[(2-aminoethyl)nitri]lo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α-hydroxy-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1
 CRN 210292-29-8
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 CCI PMS

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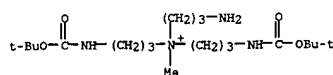
PAGE 1-B



CM 2

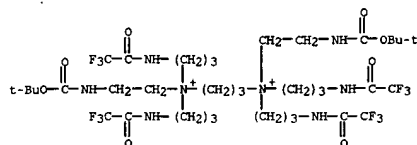
CRN 14477-72-6
 CMF C2 F3 O2

L70 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
 RN 210292-24-3 CAPLUS
 CN 1-Propanediamine, 3-amino-N,N'-bis[3-[[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-N-methyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 210292-26-5 CAPLUS
 CN 1,3-Propanediamine, N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-N,N',N'-tetrakis[3-[[trifluoroacetyl]amino]propyl]-, dibromide (9CI) (CA INDEX NAME)

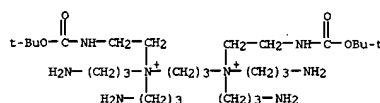


● 2 Br⁻

RN 210292-28-7 CAPLUS
 CN 1,3-Propanediamine, N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 210292-27-6
 CMF C29 H66 N8 O4



L70 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)

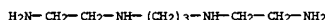


IT 248915-96-0P
 RI: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (polymer formation in the presence of nucleic acid using template polymerization)

RN 248915-96-0 CAPLUS
 CN 1,3-Propanediamine, N,N'-bis(2-aminoethyl)-, polymer with α,α',α'',α'''-[1,3-propanediylbis[[[(2-aminoethyl)nitri]lo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α-hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 4741-99-5
 CMF C7 H20 N4



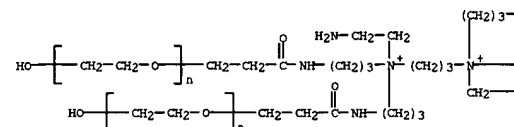
CM 2

CRN 210292-30-1
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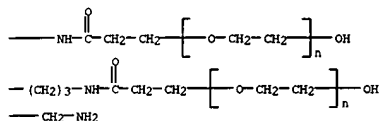
CM 3

CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI PMS

PAGE 1-A



PAGE 1-B



CM 2

CRN 14477-72-6
CMF C2 F3 O2

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Cellular polyamines of several thermophilic eubacteria and archaeobacteria were investigated by high performance liquid chromatog. and gas chromatog. A hyperthermophilic eubacterium, *Thermotoga maritima*, contained a linear pentaamine and a linear hexamine. The moderate thermophiles, *Thermotoga elfii* and *Thermodesulfobivrio yellowstoni* contained a linear pentaamine. A quaternary branched pentaamine, N4-bis(aminopropyl)spermidine, was the major polyamine in extremely thermophilic *Thermocophilum* species. Long linear and branched polyamines occurred in the extreme thermophiles, *Thermus* and *Rhodothermus*, but were not detected in moderately thermophilic *Methothermus*. In archaeobacteria, linear pentaamines were distributed in hyperthermophilic *Aeropyrum*. A moderately thermophilic hyperacidophile, *Picrophilus*, contained spermidine and lacked longer amines. N4-bis(aminopropyl)spermidine was found in a hyperthermophilic methanogen, *Methanococcus jannaschii*, as a major polyamine, but not detected in extremely/moderately thermophilic *Methanococcus* and *Methanobacterium* species. This is the first report on the occurrence of quaternary branched polyamine in methanogenic archaeobacteria. The chemotaxonomic and phylogenetic significance of the distribution of long linear and branched polyamines possibly associated with their thermophily exist in the thermophiles.

ACCESSION NUMBER: 1998:645673 CAPLUS

DOCUMENT NUMBER: 129:341520

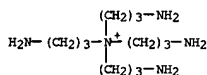
TITLE: Polyamines of the thermophilic eubacteria belonging to the genera *Thermotoga*, *Thermodesulfobivrio*, *Thermocophilum*, *Thermus*, *Rhodothermus* and *Methothermus*, and the thermophilic archaeobacteria belonging to the genera *Aeropyrum*, *Picrophilus*, *Methanobacterium* and *Methanococcus*
Hamana, K.; Nitsui, M.; Samejima, K.; Itoh, T.; Hamana, H.; Shinozawa, T.
Gunma University School of Health Sciences, Gunma, 371, Japan
SOURCE: *Microbios* (1998), 93(377), 7-21
CODEN: MCBIA7; ISSN: 0026-2633
PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 111216-37-6 143085-76-1

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)
(polyamines of thermophilic eubacteria and thermophilic archaeobacteria)

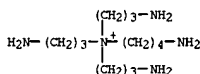
RN 111216-37-6 CAPLUS

CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-76-1 CAPLUS

CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB A method of making a compound for delivery to a cell comprising forming a polymer in the presence of a biol. active drug is disclosed. A method of forming polymers in the presence of nucleic acid using template polymerization

and of having the polymerization occur in heterophase systems is further disclosed. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid-binding polymers, for forming supramol. complexes containing nucleic acid and polymer,

and for forming an interpolyelectrolyte complex. The nuclear localizing peptide of SV40 T antigen was copolyd. with dithiobis[succinimidylpropion ate] in the presence of plasmid DNA and this process enabled the formation of complexes that expressed luciferase after transfection into 3T3 cells in culture.

ACCESSION NUMBER: 1998:485169 CAPLUS

DOCUMENT NUMBER: 129:118754

TITLE: Method for making a compound for delivery to cells by forming a polymer in the presence of a template drug, especially nucleic acid
INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetskoy, Vladimir S.; Slattum, Paul M.; Hanson, Lisa J.

PATENT ASSIGNEE(S): Mirus Corp., USA

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9829541	A1	19980709	WO 1997-US24089	19971230
RN: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6126964	A	20001003	US 1997-778657	19970103
EP 958356	A1	19991124	EP 1997-954803	19971230
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				
US 2002061287	A1	20020523	US 2001-4763	20011205
US 2002085989	A1	20020704	US 2001-5294	20011205
US 2004161463	A1	20040819	US 2004-755785	20040112
PRIORITY APPLN. INFO.:				
			US 1997-778657	A 19970103
			US 1996-9593P	P 19960104
			WO 1997-US24089	W 19971230
			US 1999-464871	A3 19991216
			US 2001-993216	A3 20011116

OTHER SOURCE(S): MARPAT 129:118754

IT 210292-23-2P 210292-24-3P 210292-26-5P

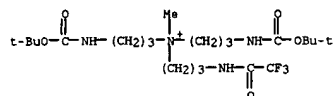
210292-28-7P 210292-30-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

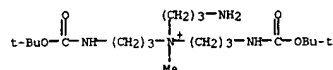
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

RN 210292-23-2 CAPLUS

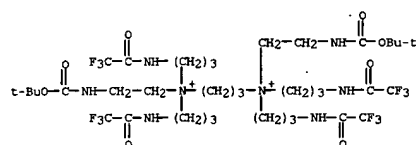
CN 1-Propanaminium, N,N-bis[3-[(1,1-dimethylethoxy)carbonyl]amino]propyl]-N-methyl-3-[(trifluoroacetyl)amino]-, bromide (9CI) (CA INDEX NAME)

● Br⁻

RN 210292-24-3 CAPLUS
CN 1-Propanediaminium, 3-amino-N,N-bis[3-[[[1,1-dimethylethoxy]carbonyl]amino]propyl]-N-methyl-, bromide (9CI) (CA INDEX NAME)

● Br⁻

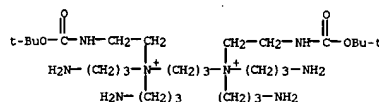
RN 210292-26-5 CAPLUS
CN 1,3-Propanediaminium, N,N'-bis[2-[[[1,1-dimethylethoxy]carbonyl]amino]ethyl]-N,N,N',N'-tetrakis[3-[[[trifluoroacetyl]amino]propyl]-], dibromide (9CI) (CA INDEX NAME)

● 2 Br⁻

RN 210292-28-7 CAPLUS
CN 1,3-Propanediaminium, N,N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[[1,1-dimethylethoxy]carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 210292-27-6
CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6
CMF C2 F3 O2

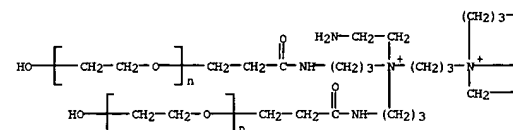


RN 210292-30-1 CAPLUS
CN Poly(oxy-1,2-ethanediyl), α,α',α'',α'''-[1,3-propanediylbis[[[(2-aminoethyl)nitrido]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α-hydroxy-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

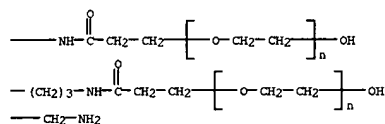
CM 1

CRN 210292-29-8
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
CCI PMS

PAGE 1-A



PAGE 1-B



CM 2

CRN 14477-72-6
CMF C2 F3 O2



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

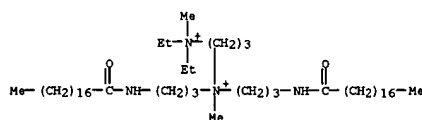
AB The softeners contain (a) quaternary ammonium compds. with 21 C10-28 long chain hydrophobic groups and 22 quaternary ammonium cationic groups and (b) anionic surfactants with C10-28 alkyl or C10-28 alkenyl groups. Thus, reacting pentaerythritol 1, stearic acid 1, and α-chloroacetic acid 2 mol while removing generated H2O at 110° in the presence of p-toluenesulfonic acid, cooling the obtained ester to 80°, diluting with Me2CHOH, adding dropwise 2 mol Et3N, and reacting gave a quaternary ammonium compound, which was blended with Me α-sulfostearate Na salt at ratio 1:0.5 to give a softener. A cotton towel and an acrylic fabric were washed and treated with the softener.

ACCESSION NUMBER: 1997:413154 CAPLUS
DOCUMENT NUMBER: 127:36234
TITLE: Fabric softeners for cotton textiles and synthetic fabrics
INVENTOR(S): Imada, Masahiro; Sasaki, Hisaya; Imai, Hiroto; Fujiwara, Masami
PATENT ASSIGNEE(S): Lion Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09111660	A2	19970428	JP 1995-264495	19951012
PRIORITY APPLN. INFO.:			JP 1995-264495	19951012

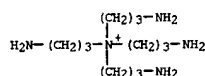
IT 190391-60-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fabric softeners containing quaternary ammonium compds. and anionic surfactants for cotton textiles and synthetic fabrics)

RN 190391-60-7 CAPLUS
CN 1,3-Propanediaminium, N,N-diethyl-N,N'-dimethyl-N,N'-bis[3-[[[1-oxooctadecyl]amino]propyl]-], dichloride (9CI) (CA INDEX NAME)

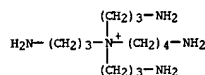
● 2 Cl⁻

L70 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB The five hyperthermophilic archaeobacteria located on the phylogenetically divergent four orders of Archaeoglobales, Thermococcales, Thermoproteales and Sulfolobales, resp., varied in their cellular polyamine components. Archaeoglobus fulgidus and Archaeoglobus profundus contained two quaternary branched penta-amines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine, as a major polyamine in addition to spermidine and spermine. Spermidine, spermine, a tertiary branched tetra-amine, N4-aminopropylspermidine, and N4-bis(aminopropyl)spermidine were the major polyamines and canavanine was the minor polyamine in Thermococcus peptonophilus. Pyrobaculum aerophilum and Sulfolobus hakenensis contained norspermidine, spermidine and norspermine as the major polyamines but they lacked either branched or long linear polyamines.

ACCESSION NUMBER: 1997:95001 CAPLUS
 DOCUMENT NUMBER: 126:183564
 TITLE: Polyamines of hyperthermophilic archaeobacteria, Archaeoglobus, Thermococcus, Pyrobaculum and Sulfolobus
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keiji; Itoh, Takashi
 CORPORATE SOURCE: Coll. Med. Care Technology, Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 87(351), 69-76
 CODEN: MCBIA7, ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 111216-37-6 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (polyamines of hyperthermophilic archaeobacteria, Archaeoglobus, Thermococcus, Pyrobaculum and Sulfolobus)
 RN 111216-37-6 CAPLUS
 CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)

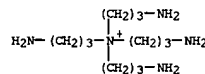


RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)

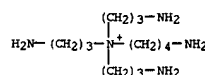


L70 ANSWER 27 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Polyamines of seventeen strains of thermophilic Gram-pos. anaerobes belonging to seven genera of clostridia were analyzed by high-performance liquid chromatog. and gas chromatog. Caldicellulosiruptor contained spermidine, spermine, thermospermine, thermopentamine, two tertiary branched tetraamines (N4-aminopropylspermidine and N4-aminopropylnorspermidine) and two quaternary branched pentaamines [N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine]. The major polyamines of Caloramator, Coprothermobacter, Moorella, Thermoanaerobacter, Thermoanaerobacterium and thermophilic Clostridium were putrescine, spermidine and spermine. N4-aminopropylspermidine and N4-bis(aminopropyl)spermidine were found as minor polyamines in some cultures of Moorella and Thermoanaerobacter.

ACCESSION NUMBER: 1996:423666 CAPLUS
 DOCUMENT NUMBER: 125:81445
 TITLE: Polyamines of thermophilic Gram-positive anaerobes belonging to the genera Caldicellulosiruptor, Caloramator, Clostridium, Coprothermobacter, Moorella, Thermoanaerobacter and Thermoanaerobacterium
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keiji
 CORPORATE SOURCE: Coll. Medical Care Technol., Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 85(345), 213-222
 CODEN: MCBIA7, ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 111216-37-6 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (polyamines of thermophilic Gram-pos. anaerobes)
 RN 111216-37-6 CAPLUS
 CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)

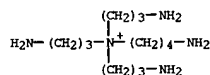


RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



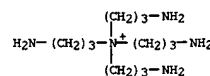
L70 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Polyamines of the seeds, seedlings, and some other tissues of 15 leguminous plants were analyzed by high performance liquid chromatog. and gas chromatog. A novel tertiary branched pentaamine, N5-aminobutylhomospermine, was detected in the seed of Vicia villosa and another novel quaternary branched pentaamine, N4-bis(aminopropyl)spermidine, in the seed of Crotalaria spectabilis. Norspermine and a novel linear pentaamine, caldopentamine, were found in the seed of Gleditsia japonica. Other unusual polyamines such as norspermidine, homospermidine, thermospermine, N4-methylthermospermine, homospermine, and N-(3-aminopropyl)aminopropanol occur widely within leguminous seeds. Nine groups of plant response were found with respect to increases of diaminopropane, putrescine, cadaverine, and agmatine in the leguminous seedlings after germination.

ACCESSION NUMBER: 1997:8218 CAPLUS
 DOCUMENT NUMBER: 126:72607
 TITLE: Further polyamine analyses of leguminous seeds and seedlings: the occurrence of novel linear, tertiary branched and quaternary branched pentaamines
 AUTHOR(S): Hamana, Koei; Niitsu, Masaru; Samejima, Keiji
 CORPORATE SOURCE: College of Medical Care and Technology, Gunma University, Gunma, 371, Japan
 SOURCE: Canadian Journal of Botany (1996), 74(11), 1766-1772
 CODEN: CJBOW; ISSN: 0008-4026
 PUBLISHER: National Research Council of Canada
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (polyamine anal. of leguminous seeds and seedlings)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)

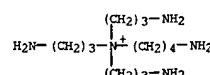


L70 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Polyamines of thermophilic eubacteria and hyperthermophilic archaeobacteria were analyzed by high-performance liquid chromatog. and gas chromatog. Thermotoga, Petrotoga, Fervidobacterium and Dictyoglomus contained tetraamines such as spermine, norspermine and thermospermine, penta-amines such as caldopentamine, homocaldopentamine and thermopentamine, and a hexa-amine, caldohexamine. These linear polyamines and the quaternary branched pentaamines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine were found in Thermoanaerobacter cellulosilyticus. N4-bis(aminopropyl)spermidine, spermidine and spermine were the polyamine components of the other authentic Thermoanaerobacter species. The main polyamine of Thermodesulfobacterium commune was N4-bis(aminopropyl)spermidine. In archaeobacteria, an unusual triamine, homospermidine, occurred in Desulfurococcus and Staphylothermus. Caldopentamine, thermopentamine and caldohexamine were detected in Pyrodicticum, Hyperthermus and Staphylothermus. Thermoproteus and Pyrobaculum contained tri- and tetra-amines but lacked long linear and branched polyamines. The long linear and branched polyamines are widely distributed in thermophilic eubacteria and archaeobacteria and are chemotaxonomically useful in the thermophiles.

ACCESSION NUMBER: 1996:393216 CAPLUS
 DOCUMENT NUMBER: 125:53207
 TITLE: Distribution of long linear and branched polyamines in thermophilic eubacteria and hyperthermophilic archaeobacteria
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keiji; Itoh, Takashi
 CORPORATE SOURCE: Coll. Medical Care Technol., Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 85(342), 19-33
 CODEN: MCBIA7, ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 111216-37-6 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (distribution of long linear and branched polyamines in thermophilic eubacteria and hyperthermophilic archaeobacteria)
 RN 111216-37-6 CAPLUS
 CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



AB A novel quaternary branched penta-amine, N4-bis(aminopropyl)norspermidine, was the main polyamine of the thermophilic, chemolithotrophic, hydrogen-oxidizing eubacteria, *Hydrogenobacter acidophilus* and *Calderobacterium hydrogenophilum*. The mesophilic, chemolithotrophic, hydrogen-oxidizing eubacterium, *Hydrogenovibrio marinus* contained putrescine and spermidine. The thermoacidophilic *Stygiolobus azoricus* growing chemolithotrophically by reduction of sulfur, and a thermoacidophile, *Desulfurolobus ambivalens*, growing chemolithotrophically by either oxidation or reduction of sulfur, belonging to the family *Sulfolobaceae* (order *Sulfolobales*) of the archaeobacteria, ubiquitously contained norspermidine, spermidine, norspermine and spermine.

ACCESSION NUMBER: 1995:606451 CAPLUS
DOCUMENT NUMBER: 123:29189

TITLE: Polyamines in the hydrogen-oxidizing eubacteria *Hydrogenobacter*, *Calderobacterium* and *Hydrogenovibrio* and the sulfur-reducing archaeobacteria *Stygiolobus* and *Desulfurolobus*

AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Itoh, Takashi
CORPORATE SOURCE: College of Medical Care and Technology, Gunma University, Gunma, 371, Japan

SOURCE: *Microbios* (1995), 81(329), 223-9
CODEN: MCBIA7; ISSN: 0026-2633

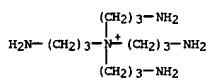
PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 111216-37-6

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)
(polyamines in the hydrogen-oxidizing eubacteria *Hydrogenobacter*, *Calderobacterium* and *Hydrogenovibrio* and the sulfur-reducing archaeobacteria *Stygiolobus* and *Desulfurolobus*)

RN 111216-37-6 CAPLUS

CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



AB Polyamines of thermophilic archaeobacteria were analyzed by HPLC and gas chromatog. *Thermoplasma acidophilum* and *Thermoplasma volcanium* ubiquitously contained spermidine and spermine. Four spp. of *Sulfolobus*, *S. acidocaldarius*, *S. solfataricus*, *S. metallicus*, and *S. shibatae*, 2 spp. of *Acidianus*, *A. brierleyi* and *A. infernus*, and *Metallosphaera sedula* contained norspermidine and norspermine in addition to spermidine and spermine, but quant. distribution profiles were species-specific. A tertiary tetraamine, N4-aminopropylspermidine, and a quaternary pentaamine, N4-bis(aminopropyl)spermidine, were detected as major polyamines in 3 spp. of *Thermococcus*, *T. caler*, *T. litoralis*, and *T. stetteri*, and 2 *Pyrococcus* spp., *P. furiosus* and *P. woesei*. This is the 1st report of the occurrence of branched polyamines in archaeobacteria.

ACCESSION NUMBER: 1995:82668 CAPLUS

DOCUMENT NUMBER: 122:5033

TITLE: Occurrence of tertiary and quaternary branched polyamines in thermophilic archaeobacteria

AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Wlitsau, Masaru; Sanejima, Keijiro; Sakane, Takeshi; Yokota, Akira
CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan

SOURCE: *Microbios* (1994), 79(319), 109-19
CODEN: MCBIA7; ISSN: 0026-2633

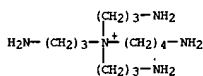
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 143085-76-1

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)
(tertiary and quaternary branched polyamines in thermophilic archaeobacteria)

RN 143085-76-1 CAPLUS

CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



AB The effects of novel polyamines on aminoacyl-tRNA formation catalyzed by *Escherichia coli*, *Sulfolobus acidocaldarius*, and *Thermus thermophilus* HB8 S-100 exts. were investigated. These effects were diverse and differed depending on the amino acid and the enzyme used. A quaternary polyamine, tetrakis(3-aminopropyl)ammonium, inhibited phenylalanyl-tRNA synthesis catalyzed by the *T. thermophilus* extract, but did not inhibit the other aminoacyl-tRNA formations tested. The inhibition was observed in hybrid reactions where the thermophile tRNA or extract was replaced by its *E. coli* counterpart, although the quaternary amine did not inhibit Phe-tRNA formation by the *E. coli* homologous system. Spermine relieved the inhibition of the reaction of thermophile enzyme and tRNA, but not the inhibition of the hybrid reactions. These results suggest that the branched polyamine interacts with both the thermophile enzyme and tRNA^{Phe}.

ACCESSION NUMBER: 1994:528507 CAPLUS

DOCUMENT NUMBER: 121:128507

TITLE: Effects of unusual polyamines on phenylalanyl-tRNA formation

AUTHOR(S): Uzawa, Taketoshi; Yamagishi, Akihiko; Nishikawa, Kazuya; Oshima, Taro
CORPORATE SOURCE: Dep. Life Sci., Tokyo Inst. Technol., Yokohama, 227, Japan

SOURCE: *Journal of Biochemistry* (Tokyo, Japan) (1994), 115(5), 830-2

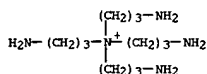
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 111216-37-6

RL: BIOL (Biological study)
(phenylalanyl-tRNA synthetase of *Sulfolobus acidocaldarius* and *Thermus thermophilus* inhibition by)

RN 111216-37-6 CAPLUS

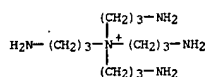
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



L70 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN

AB A continuous cell-free protein synthesis system of an extremely thermophilic eubacterium, *Thermus thermophilus* HB27, was constructed. This system produced MS2 phage RNA translation products at a rate of more than 5 µg per h per 1.9 mg of ribosomes at 65°C, and the production continued linearly for at least 340 min. When no polyamine was added, the system did not produce the proteins. The highest activity was recorded when 0.1 mM tetrakis(3-aminopropyl) ammonium and 1.0 mM spermine were added simultaneously.

ACCESSION NUMBER: 1994:48250 CAPLUS
DOCUMENT NUMBER: 120:48250
TITLE: Effects of polyamines on a continuous cell-free protein synthesis system of an extreme thermophile, *Thermus thermophilus*
AUTHOR(S): Uzawa, Taketoshi; Yanagishi, Akihiko; Ueda, Takuya; Chikazumi, Nobutoshi; Watanabe, Kimitsuna; Oshima, Tairo
CORPORATE SOURCE: Dep. Life Sci., Tokyo Inst. Technol., Yokohama, 227, Japan
SOURCE: Journal of Biochemistry (Tokyo, Japan) (1993), 114(5), 732-4
CODEN: JOBIAO; ISSN: 0021-924X
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 111216-37-6
RL: BIOL (Biological study)
(cell-free protein synthesis system of *Thermus thermophilus* response to)
RN 111216-37-6 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)

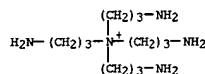


L70 ANSWER 33 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN

AB Effects of novel, naturally occurring polyamines on protein synthesis catalyzed by *T. thermophilus* cell-free extract were investigated. The results revealed the physiol. importance of a branched quaternary polyamine, tetrakis(3-aminopropyl) ammonium, in thermophilic protein biosynthesis. Longer polyamines than triamine supported the polypeptide synthesis at high temperature, though both the activity and the optimum temperature varied depending on polyamines added. The highest activity was found when tetrakis(3-aminopropyl) ammonium and a tetraamine were simultaneously present. The optimum temperature of the reaction supported by the combination of the branched polyamine and spermine was the highest and in accord with the optimum temperature of the bacterial growth. These results suggested an essential role of the quaternary amine in protein synthesis in vivo. This amine effectively stabilized the ternary complex between ribosomes, the messenger, and phenylalanyl-tRNA, and this stabilization may account, at least in part, for its action on the present reaction. In contrast, another branched polyamine, tris(3-aminopropyl)amine, supported the activity only moderately even in the presence of another polyamine, though the tris amine stabilized the ternary complex as effectively as the quaternary amine. This result suggests the presence of another essential site for polyamine action in the thermophile polypeptide synthesis, in addition to the stabilization of the ternary complex. The effects of polyamines on MS2 RNA directed reaction resembled those on poly(U) directed polypeptide synthesis, indicating that polyamines are essential in protein biosynthesis directed by natural messengers in vivo. The quaternary amine inhibited the aminoacylation of tRNA^{Phe}, and the inhibition was canceled by the addition of another polyamine. When phenylalanyl-tRNA instead of free phenylalanine was added to the reaction mixture to investigate the effect of polyamines on polypeptide formation, single addition of tetrakis(3-aminopropyl) ammonium was enough for the highest activity, and the synergistic effect disappeared. The results indicate that the role of spermine in the synergism is to relieve the inhibition of aminoacylation caused by the quaternary amine.

ACCESSION NUMBER: 1994:27169 CAPLUS
DOCUMENT NUMBER: 120:27169
TITLE: Effects of novel polyamines on cell-free polypeptide synthesis catalyzed by *Thermus thermophilus* HB8 extract
AUTHOR(S): Uzawa, Taketoshi; Hamasaki, Nobuko; Oshima, Tairo
CORPORATE SOURCE: Dep. Life Sci., Tokyo Inst. Technol., Yokohama, 227, Japan
SOURCE: Journal of Biochemistry (Tokyo, Japan) (1993), 114(4), 478-86
CODEN: JOBIAO; ISSN: 0021-924X
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 111216-37-6
RL: BIOL (Biological study)
(polypeptide formation by *Thermus thermophilus* cell-free extract response to)
RN 111216-37-6 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)

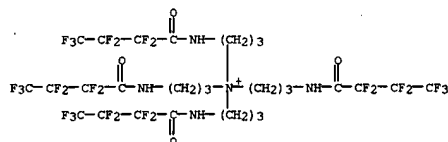
L70 ANSWER 33 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



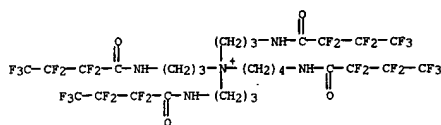
L70 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN

AB Using heptafluorobutyl derivs. of 27 linear di-, tri-, tetra-, penta- and hexaamines containing various sets of isomers, and 4 tertiary tetraamines and 5 quaternary pentaamines, mostly with 3 or 4 methylene chain units, their gas chromatog. (GC) and gas chromatog.-mass spectrometric (GC-MS) properties were compared and examined. Several results useful for their systematic anal. were found: assured baseline separation of 1 methylene difference in linear di- and polyamines and tertiary tetraamines by GC; distinct pyrolytic decomposition patterns of quaternary pentaamines by GC; distinct cleavage patterns of 3 or 4 methylene chain units by GC-MS; and distinct mass spectra of linear polyamines and tertiary tetraamines by GC-MS.

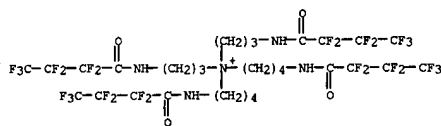
ACCESSION NUMBER: 1993:551383 CAPLUS
DOCUMENT NUMBER: 119:551383
TITLE: Systematic analysis of naturally occurring linear and branched polyamines by gas chromatography and gas chromatography-mass spectrometry
AUTHOR(S): Niitsu, Masaru; Samejima, Keijiro; Matsuzaki, Shigeru; Hamana, Koei
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Josai University, 1-1 Keyakidai, Sakado, Saitama, 350-02, Japan
SOURCE: Journal of Chromatography (1993), 641(1), 115-23
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 149981-88-4 149981-89-5 149981-90-8
RL: ANT (Analyte); ANST (Analytical study)
(gas chromatog. and mass spectrometry of)
RN 149981-88-4 CAPLUS
CN 1-Propanaminium, 3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N,N-tris[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)



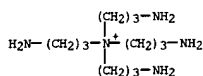
RN 149981-89-5 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N,N-tris[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)



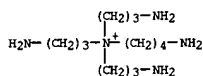
RN 149981-90-8 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N-[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]-N,N-bis[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)



IT 111216-37-6 143085-76-1 143085-77-2
RL: PRP (Properties); ANST (Analytical study)
(gas chromatog.-mass spectrometry of, as heptafluorobutyryl derivative)
RN 111216-37-6 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



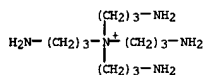
RN 143085-76-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-77-2 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)

AB Tertiary tetraamines and quaternary pentaamines composed of aminopropyl and/or aminobutyl groups were synthesized as authentic samples for the identification of naturally occurring branched polyamines. Four tertiary tetraamines, including [H₂N(CH₂)_n]₃N⁺·4HCl (n = 3, 4) and [H₂N(CH₂)₃]₂N(CH₂)₄NH₂·HCl, were obtained by alkylating the free secondary amine group of dipthaloyl derivs. of sym-norspermidine or sym-homospermidine with N-(3-bromopropyl)phthalimide or N-(4-bromobutyl)phthalimide in the presence of KF-Cellite. Five quaternary pentaamines, e.g., [H₂N(CH₂)_n]₄N⁺·4HCl (n = 3, 4), were obtained by fusing triphthaloyl derivs. of the tertiary tetraamines with an excess amount of N-(3-iodopropyl)phthalimide or N-(4-iodobutyl)phthalimide. The present methods are simple and achieved high yields. The ¹³C-NMR spectra of these branched polyamines were recorded in D₂O as fully protonated forms, and all ¹³C chemical shifts were assigned consistently.

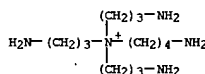
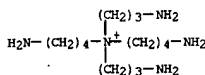
ACCESSION NUMBER: 1993:427654 CAPLUS
DOCUMENT NUMBER: 119:27654
TITLE: Syntheses of tertiary tetraamines and quaternary pentaamines with three and four methylene chain units
AUTHOR(S): Niitsu, Masaru; Sano, Hiroo; Sanejima, Keijiro
CORPORATE SOURCE: Fac. Pharm. Sci., Josai Univ., Sakado, 350-02, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1992), 40(11), 2958-61
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 119:27654
IT 148275-60-9P 148275-61-0P 148275-62-1P
148275-70-1P 148275-71-2P 148275-80-3P
148275-85-8P
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)
RN 148275-60-9 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)-, chloride, monohydrochloride (9CI) (CA INDEX NAME)



● Cl⁻

● HCl

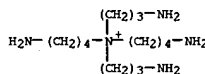
RN 148275-61-0 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)



● Cl⁻

● 4 HCl

RN 148275-62-1 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)



● Cl⁻

● 4 HCl

RN 148275-70-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)-, perchlorate, tetrahydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CHF Cl H O4



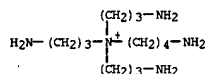
CM 2

CRN 148275-69-8

L70 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CMF C13 H34 N5 . C1 O4

CM 3

CRN 143085-76-1
CMF C13 H34 N5

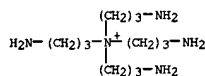


CM 4

CRN 14797-73-0
CMF C1 O4



RN 148275-71-2 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)-, chloride, hydrochloride (2:9) (9CI) (CA INDEX NAME)



● Cl⁻

● 9/2 HCl

RN 148275-80-3 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, perchlorate, tetraperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H O4

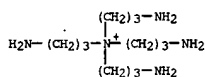
L70 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CM 2

CRN 148275-84-7
CMF C12 H32 N5 . C1 O4

CM 3

CRN 111216-37-6
CMF C12 H32 N5



CM 4

CRN 14797-73-0
CMF C1 O4



L70 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

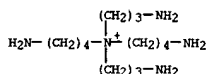


CM 2

CRN 148275-79-0
CMF C14 H36 N5 . C1 O4

CM 3

CRN 143085-77-2
CMF C14 H36 N5



CM 4

CRN 14797-73-0
CMF C1 O4



RN 148275-85-8 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)-, perchlorate, tetraperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H O4



L70 ANSWER 36 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
AB Polyamines of thermophilic gram-neg. eubacteria, *Rhodothermus marinus* ATCC 43812, *Thermus* sp. ATCC 43814, and *Thermomonas lapaum* ATCC 43542 were analyzed by HPLC and gas chromatog.-mass spectrometry. *R. marinus* contained spermidine, spermine, thermopentamine, a tertiary tetraamine (N4-aminopropylspermidine), and a quaternary pentaamine (N4-bis(aminopropyl)spermidine). *Thermus* sp. ATCC 43814 contained putrescine, cadaverine, norspermidine, spermidine, homospermidine, norspermine, spermine, thermospermine, aminopropylhomospermidine, caldopentamine, spermatine, 2 tertiary tetraamines (N4-aminopropylhomospermidine and N4-aminopropylspermidine), and 2 quaternary pentaamines (N4-bis(aminopropyl)norspermidine and N4-bis(aminopropyl)spermidine). Homospermidine and homospermine were detected in *T. lapaum* as the major polyamine. These distribution patterns of long and branched polyamines are distinctive in the thermophiles, indicating that unusual polyamine profiles serve to estimate chemotaxonomic and phylogenetic relations within thermophilic eubacteria.

ACCESSION NUMBER: 1993:251160 CAPLUS

DOCUMENT NUMBER: 118:251160

TITLE: Distribution of unusual long and branched polyamines in thermophilic eubacteria belonging to "Rhodothermus," *Thermus* and *Thermomonas*

AUTHOR(S): Hamana, Xoei; Hamana, Hiroshi; Niitsu, Masaru;

Samejima, Keiji; Matsuzaki, Sigeru

CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan

SOURCE: Journal of General and Applied Microbiology (1992), 38(6), 575-84

CODEN: JGAMA9; ISSN: 0022-1260

DOCUMENT TYPE: Journal

LANGUAGE: English

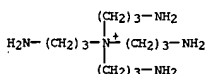
IT 111216-37-6 143085-76-1

RL: BIOL (Biological study)

(of thermophilic eubacteria)

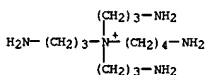
RN 111216-37-6 CAPLUS

CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-76-1 CAPLUS

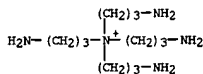
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



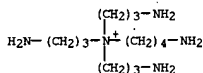
L70 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN

AB Novel tertiary branched tetraamines, quaternary branched pentaamines, linear pentaamines, and linear hexaamines were distributed as the major polyamines in 6 obligately extremely thermophilic eubacteria belonging to Thermoleophilum, Bacillus, or Hydrogenobacter. The major polyamine of T. album and T. minutum was identified as a quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane (NH₂(CH₂)₃N+((CH₂)₄NH₂)₂(CH₂)₄NH₂) by HPLC, TLC, and gas chromatog.-mass spectrometry. H. thermophilus and H. halophilus contained another quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,7-diamino-4-azaoctane as the major polyamine, and tertiary branched tetraamines (4-(3-aminopropyl)-1,7-diamino-4-azaoctane, 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, and 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane were confirmed as minor components. B. schlegelii contained a branched tetraamine, 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, a branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane, a linear pentaamine, 1,16-diamino-4,8,13-triazahexadecane and linear hexaamine(s), 1,20-diamino-4,8,12,17-tetraazaeicosane and/or 1,20-diamino-4,8,13,17-tetraazaeicosane.

ACCESSION NUMBER: 1992:567247 CAPLUS
DOCUMENT NUMBER: 117:167247
TITLE: Novel linear and branched polyamines in the extremely thermophilic eubacteria Thermoleophilum, Bacillus and Hydrogenobacter
AUTHOR(S): Hamana, Koel; Hitsu, Masaru; Matsuzaki, Shigeru; Samejima, Keijiro; Igarashi, Yasuo; Kodama, Tooru
CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan
SOURCE: Biochemical Journal (1992), 284(3), 741-7
CODEN: BIJOAK ISSN: 0306-3275
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 111216-37-6 143085-76-1 143085-77-2
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (of thermophilic bacteria)
RN 111216-37-6 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-76-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



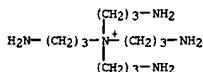
RN 143085-77-2 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (9CI)

L70 ANSWER 38 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN

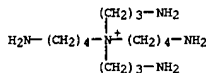
AB The effect of unusual polyamines, such as thermine, caldopentamine, caldohexamine, tris(3-aminopropyl)amine, or tetrakis(3-aminopropyl)ammonium, on the activities of various restriction endonucleases was investigated by using an Escherichia coli plasmid as a substrate, which contains a high GC content fragment from an extreme thermophile. Restriction enzymes used were SmaI, BanII, NaeI, RsaI, and TaqI. Most of the polyamines tested were inhibitory to the enzyme activities. The larger and more branched a polyamine was, the more the activities of nucleases were inhibited. The inhibition was positively correlated with the polyamine concentration. The sites protected by a polyamine

were identical to those protected by other polyamines, and also identical to those which were less sensitive to the restriction enzyme in the absence of polyamines. No sequence specificity was seen among these sites.
ACCESSION NUMBER: 1990:473586 CAPLUS
DOCUMENT NUMBER: 113:73586
TITLE: Effect of unusual polyamines on the cleavage of DNA by restriction enzymes
AUTHOR(S): Kirino, Hiromi; Kuwahara, Reiko; Hamasaki, Nobuko; Oshima, Tairo
CORPORATE SOURCE: Dep. Life Sci., Tokyo Inst. Technol., Yokohama, 227, Japan
SOURCE: Journal of Biochemistry (Tokyo, Japan) (1990), 107(5), 661-5
CODEN: JOBIAO; ISSN: 0021-924X
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 111216-37-6
RL: BIOL (Biological study) (restriction endonuclease inhibition by)
RN 111216-37-6 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



L70 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
(CA INDEX NAME)



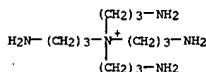
L70 ANSWER 39 OF 42 CAPLUS COPYRIGHT 2005 ACS ON STN

AB N+(CH₂CH₂CH₂NH₂)₄ (I) salts, useful as pharmaceuticals (no data), are prepared N(CH₂CH₂CONH₂)₃ in THF was reduced with LiAlH₄ at room temperature and resultant material in aqueous HCl was passed through a column of Dowex-50W to give N(CH₂CH₂CH₂NH₂)₃.HCl which was reacted with phthalic anhydride in NaOAc at 200° to give 69% tris(3-phthalimidopropyl)amine (IV). Sep. prepared N-(3-iodopropyl)phthalimide was refluxed with IV in dioxane for 3 h to give 71% tetrakis(3-phthalimidopropyl)ammonium iodide which was reduced with H₂NNH₂.H₂O in EtOH by refluxing 2 h and the resulting material was treated with 6 N aqueous HCl to give 47% quaternary ammonium salt.

I Cl-
ACCESSION NUMBER: 1989:74818 CAPLUS
DOCUMENT NUMBER: 110:74818
TITLE: Preparation of tetrakis(3-aminopropyl)ammonium salts as pharmaceuticals
INVENTOR(S): Oshima, Yasuo; Hamazaki, Nobuko; Kakinuma, Katsumi; Kuwahara, Isao
PATENT ASSIGNEE(S): Mitsubishi Kasei Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKOXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

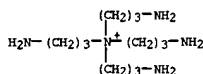
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63183547	A2	19880728	JP 1987-13623	19870123
PRIORITY APPLN. INFO.:			JP 1987-13623	19870123

IT 118787-05-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and reaction of, with hydrochloric acid)
RN 118787-05-6 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)-, iodide (9CI) (CA INDEX NAME)



● I -

IT 118787-04-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as pharmaceutical)
RN 118787-04-5 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)

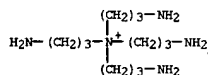


● C1-

● 4 HCl

AB A new polyamine, tetrakis(3-aminopropyl)ammonium, N⁺-(CH₂CH₂CH₂NH₂)₄, was identified in cells of an extreme thermophile, *T. thermophilus*. This compound was chemically synthesized and its chemical properties were coincident with those of the amine isolated from the thermophile.

ACCESSION NUMBER: 1987:614536 CAPLUS
DOCUMENT NUMBER: 107:214536
TITLE: A new naturally occurring polyamine containing a quaternary ammonium nitrogen
AUTHOR(S): Oshima, Tairo; Hamasaki, Nobuko; Senshu, Mitsuko; Kakinuma, Katsumi; Kuwajima, Isao
CORPORATE SOURCE: Dep. Life Sci., Tokyo Inst. Technol., Yokohama, 227, Japan
SOURCE: Journal of Biological Chemistry (1987), 262(25), 11979-81
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 111216-37-6P
RL: SPN (Synthetic preparation); PREP (Preparation) (of *Thermus thermophilus*, purification and properties of, chemical preparation in relation to)
RN 111216-37-6 CAPLUS
CN 1-Propanaminium, 3-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



AB The agents suitable for breaking all cation active asphalt emulsions contain 30-99% H₂O and/or C1-3 alcs. and the polyamine Me sulfates [RNHMeCH₂CH₂CH₂NH₂Me]. (MeSO₄)₂ (I) [91038-06-1], [RNHMeCH₂CH₂CH₂NHMeCH₂CH₂NH₂Me]. (MeSO₄)₃ [91038-08-3], [MeNH₂CH₂CH₂CH₂CH₂CH₂CH₂CH₂CH₂NHMeCH₂CH₂CH₂NH₂Me] 2]. (MeSO₄)₄ [91038-11-8], [MeNH₂CH₂CH₂CH₂CH₂CH₂CH₂CH₂CH₂NHMeCH₂CH₂CH₂NH₂Me] 2]. (MeSO₄)₄ [91038-14-1], [RNHMeCH₂CH₂CH₂NHMeCH₂CH₂CH₂NHMeCH₂CH₂CH₂NHMe] 2]. (MeSO₄)₄ [91108-18-8], or [MeNH₂CH₂CH₂CH₂NHMeCH₂CH₂CH₂NHMeCH₂CH₂CH₂NHMe] 2]. (MeSO₄)₅ [91038-17-4], where R = n-C₁₈H₃₇. The agents are used in construction, repair, and maintenance of roads and airport runways. Thus, 100 g aggregates (grain size ≤ 5 mm), containing 60% basalt and 40% quartz sand, was wetted with 15 mL water containing 0.2 g agent from 30% I and 70% water, 18 mL 60% asphalt emulsion prepared by using 0.4% octadecyltripropylene tetramine as an emulsifier, was added, and the emulsion was broken within 60 s.

ACCESSION NUMBER: 1984:459247 CAPLUS
DOCUMENT NUMBER: 101:59247
TITLE: Agent for controlling time of breaking of cation-active asphalt emulsions
INVENTOR(S): Volf, Jiri; Pasek, Josef; Repkova, Mariana; Machytka, Vladimir; Ruzicka, Jaroslav; Vacek, Antonin
PATENT ASSIGNEE(S): Czech.
SOURCE: Czech., 4 pp.
CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Czech
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 207430	B	19810731	CS 1979-4824	19790710
PRIORITY APPLN. INFO.:			CS 1979-4824	A 19790710

IT 91038-17-4 91108-18-8
RL: USES (Uses)

RN 91038-17-4 CAPLUS
CN 1,3-Propanediaminium, N,N'-dimethyl-N,N'-tris[3-(methylamino)propyl]-N'-octadecyl-, bis(methyl sulfate), tris(methyl sulfate) (9CI) (CA INDEX NAME)

CM 1

CRN 75-93-4
CMF C H4 O4 S



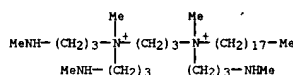
CM 2

CRN 91038-16-3

CMF C35 H79 N5 . 2 C H3 O4 S

CM 3

CRN 91038-15-2
CMF C35 H79 N5



CM 4

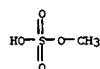
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 91108-18-8 CAPLUS
CN 1-Propanaminium, N-methyl-N,N-bis[3-(methylamino)propyl]-3-(methyloctadecylamino)-, methyl sulfate, tris(methyl sulfate) (9CI) (CA INDEX NAME)

CM 1

CRN 75-93-4
CMF C H4 O4 S

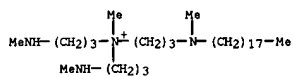


CM 2

CRN 91108-17-7
CMF C31 H69 N4 . C H3 O4 S

CM 3

CRN 91108-16-6
CMF C31 H69 N4



CM 4

CRN 21228-90-0
CMF C H3 O4 SMe-O-SO₃⁻

L70 ANSWER 42 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
 AB R2R1N:CH2CH2NEX- (I; R, R1 = H, alkyl; X = SO2, SO3) were prepared by
 reaction of NR2R1-SO2 or NR2R1-SO3 addition compds. with aziridine. Thus,
 32 parts SO2 was passed into a solution containing 36.5 parts BuNH2 in 150
 parts C6H6 at 20-5° and 21.5 part aziridine added slowly at 30-40°
 to give 63.3% I (R = H, R1 = Bu, X = SO2). Similarly prepared were 17 other
 I.

ACCESSION NUMBER: 1971:509827 CAPLUS
 DOCUMENT NUMBER: 75:109827
 TITLE: Ammonium betaines
 INVENTOR(S): Distler, Harry; Widder, Rudi
 PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik AG
 SOURCE: Ger. Offen., 15 pp.
 CODEN: GWXXEX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1963399	A	19710624	DE 1969-1963399	19691218
US 3741998	A	19730626	US 1970-96270	19701208
NL 7018343	A	19710622	NL 1970-18343	19701216
FR 2073824	A5	19711001	FR 1970-45308	19701216
JP 48037019	B4	19731108	JP 1970-113159	19701218
PRIORITY APPLN. INFO.:			DE 1969-1963399	A 19691218

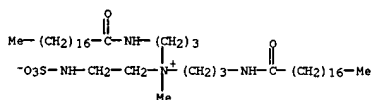
IT 32797-22-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 32797-22-1 CAPLUS

CN Ammonium, methylbis(3-stearamidopropyl)[2-(sulfoamino)ethyl]-, hydroxide,
 inner salt (8CI) (CA INDEX NAME)



=> fil reg
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
211.53	3431.16

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-30.66	-50.37

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DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

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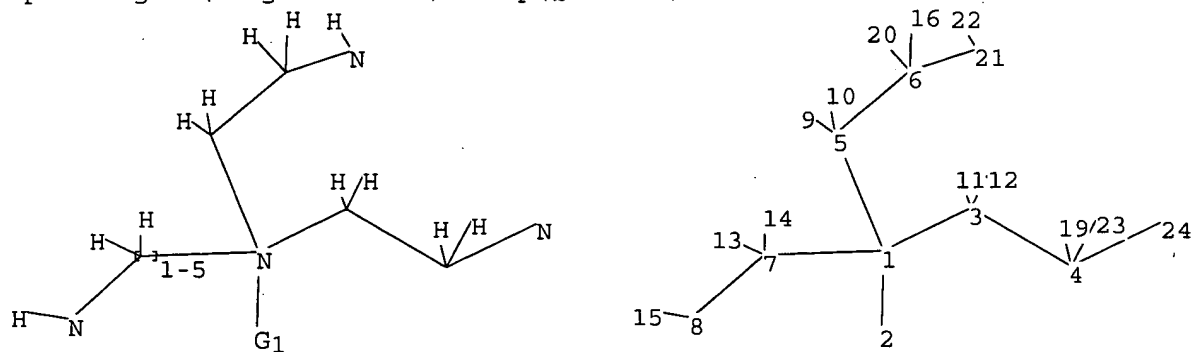
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24
 chain bonds :
 1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
 exact bonds :
 3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

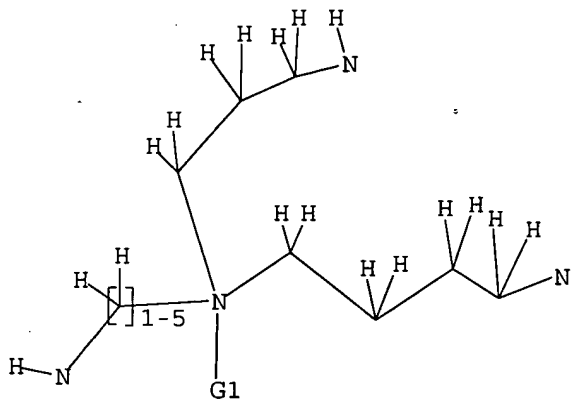
Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L71 STRUCTURE UPLOADED

=> d query

L71

STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 171

SAMPLE SEARCH INITIATED 17:55:56 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 867 TO ITERATE

100.0% PROCESSED 867 ITERATIONS
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**

PROJECTED ITERATIONS: 15574 TO 19106
 PROJECTED ANSWERS: 0 TO 0

L72 0 SEA SSS SAM L71

=> s 171 full
FULL SEARCH INITIATED 17:56:01 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 16953 TO ITERATE

100.0% PROCESSED 16953 ITERATIONS 21 ANSWERS
SEARCH TIME: 00.00.02

L73 21 SEA SSS FUL L71

=> fil caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	161.76	3592.92
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-50.37

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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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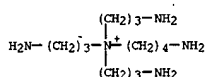
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 173
L74 17 L73

=> d 174 1-17 abs ibib hitstr

L74 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of newly isolated acidophilic, thermophilic and thermoacidophilic archaeobacteria were investigated for the chemotaxonomic significance of polyamine distribution profiles. In addition to spermidine, spermine and agmatine, a quaternary branched penta-amine, N4-bis(aminopropyl)spermidine, was found in thermophilic Thermococcus waiotapuensis, Thermococcus aegaeus and Pyrococcus glycovorans belonging to the order Thermococcales. An acidophilic euryarchaeon, Ferropasma acidiphilum located in the order Thermoplasmatales, contained spermidine and agmatine. Norspermidine, spermidine, norspermine and spermine were found in thermoacidophilic Acidilobus acetatus and thermophilic Thermodiscus maritimus located in the order Desulfurococcales, and in thermophilic Pyrobaculum arsenaticum, Pyrobaculum oguniense, Vulcanisaeta distributa and Vulcanisaeta souniana belonging to the order Thermoproteales; however, the four genera differ on their tetra- and penta-amine levels. Thermophilic Staphylothermus hellenicus belonging to Desulfurococcales contained caldopentamine, caldohexamine and N1-acetylcaldopentamine in addition to norspermidine, spermidine and norspermine. This is the first report on the occurrence of acetylated penta-amine in nature.

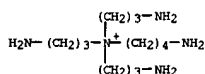
ACCESSION NUMBER: 2004:69144 CAPLUS
 DOCUMENT NUMBER: 141:274078
 TITLE: Cellular polyamines of the acidophilic, thermophilic and thermoacidophilic archaeobacteria, Acidilobus, Ferropasma, Pyrobaculum, Pyrococcus, Staphylothermus, Thermococcus, Thermodiscus and Vulcanisaeta
 AUTHOR(S): Hamana, Koei; Tanaka, Takehiko; Hosoya, Ryuichi; Niitsu, Masaru; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Maebashi, 371-8514, Japan
 SOURCE: Journal of General and Applied Microbiology (2003), 49(5), 287-293
 CODEN: JGAMA9; ISSN: 0022-1260
 PUBLISHER: Microbiology Research Foundation
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1, N4-Bis(aminopropyl)spermidine
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (polyamines in relation to taxonomy of archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L74 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of 4 new thermophilic eubacteria located in 3 early branched eubacterial clades, were investigated for the chemotaxonomic significance of polyamine distribution profiles. The thermophilic anaerobic Thermosipho japonicus, belonging to the order Thermotogales, contained norspermidine, norspermine and thermospermine in addition to spermidine and spermine. The polyamine profile was identical to the polyamine composition of Thermotoga, Fervidobacterium and Petrotoga species of the order. Spermidine, norspermidine, spermine, N4-bis(aminopropyl)spermidine and agmatine were found in thermophilic aerobic Thermoerobacter marianensis. Some differences were observed in the polyamine compns. of the phylogenetically related thermophilic anaerobes, Moorella, Dictyoglomus, Thermoanaerobacterium and Thermoanaerobacter species. Thermophilic anaerobic C. kristjanssonii and C. owensensis contained a linear penta-amine, thermopentamine, and 2 quaternary branched penta-amines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine, as the major polyamines. A novel tertiary branched penta-amine, N4-aminopropylspermine, was found in the 2 Caldicellulosiruptor species.

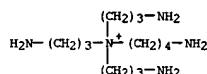
ACCESSION NUMBER: 2001:329885 CAPLUS
 DOCUMENT NUMBER: 135:58231
 TITLE: Polyamines of the thermophilic eubacteria belonging to the genera Thermosipho, Thermoerobacter and Caldicellulosiruptor
 AUTHOR(S): Hamana, Koei; Niitsu, Masaru; Samejima, Kei-jiro; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
 SOURCE: Microbios (2001), 104(409), 177-185
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines of Thermosipho, Thermoerobacter and Caldicellulosiruptor)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L74 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB A plant protection formulation contains at least one Cu2+-containing compound as an active ingredient, characterized in that the active ingredient comprises an amount of at least one chelate of Cu2+ with a polyamine compound
 ACCESSION NUMBER: 2003:715744 CAPLUS
 DOCUMENT NUMBER: 139:241667
 TITLE: Plant protection formulation containing a copper-polyamine chelate
 INVENTOR(S): Camerlynck, Rudiger; De Potter, Pierre
 PATENT ASSIGNEE(S): RMS Micro-Nutrients N. V., Belg.
 SOURCE: Eur. Pat. Appl., 14 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

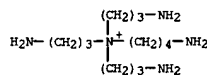
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1342413	A1	20030910	EP 2002-447035	20020308
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, HK, CY, AL, TR				
PRIORITY APPL. INFO:			EP 2002-447035	20020308
IT 143085-76-1D, copper chelates				
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (plant protection formulation containing)				
RN 143085-76-1	CAPLUS			
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI)	(CA INDEX NAME)			



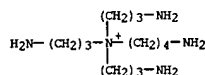
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L74 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Cellular polyamines of eight new thermophilic archaeobacteria were investigated to determine the chemotaxonomic significance of polyamine distribution profiles. Hyperthermoacidophilic Caldivirga maquilingsensis belonging to the family Thermoproteaceae of the Crenarchaeota have a unique polyamine profile comprising spermidine, norspermidine and norspermine as the major polyamines. Within the order Thermococcales of the Euryarchaeota, the major polyamines of an extremely thermophilic terrestrial species of Thermococcus, T. zilligii, were spermidine and agmatine, whereas hyperthermophilic submarine species of Thermococcus and hyperthermophilic submarine Palaeococcus ferrophilus contained a quaternary branched penta-amine, N4-bis(aminopropyl)spermidine, as a major polyamine. A hyperthermophilic methanogen, Methanothermobacter sociabilis, belonging to Euryarchaeota, contained spermidine and spermine as the major polyamine.

ACCESSION NUMBER: 2001:186968 CAPLUS
 DOCUMENT NUMBER: 134:323232
 TITLE: Polyamines of the hyperthermophilic archaeobacteria belonging to the genera Thermococcus and Methanothermobacter and two new genera Caldivirga and Palaeococcus
 AUTHOR(S): Hamana, Koei; Itoh, Takashi
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
 SOURCE: Microbios (2001), 104(408), 105-114
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (polyamines of archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



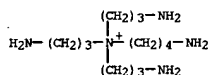
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

174 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STW
AB Cellular polyamines of thermophilic bacteriaria and archaeobacteria were
investigated for the chemotaxonomic significance of polyamine distribution
profiles within thermophiles. A quaternary branched penta-amine,
N4-bis(amino-propyl)norspermidine, and another quaternary branched
penta-amine, N4-bis (amino-propyl)spermidine, were the main polyamines in
the thermophilic bacteriaria, Aquifex pyrophilus and Thermodesulfobacterium
mobile, resp. These quaternary amines and linear hexa-amines were also
found in Thermus thermophilus but not detected in the new Thermus species,
T. brockianus and T. cohnii, and Helicobacter species, H. cochaniophilus and
H. silvanus as well as in Gram-negative bacteria, Gram-positive bacteria, and
fungi. Thermobacterium, Gram-negative bacteria, and fungi, respectively, contained
norspermidine, spermidine, norspermidine, and spermine. In addition
to these triamines and tetraamines, Stetteria hydrogenophila and
Thermocladium modestum contained homocadodecamin and/or
thermopentamine, and Sulfobobococcus zilligii contained cadaverine and
homospermidine. The main polyamine of the hyperthermophilic
Euryarchaeota, Pyrococcus horikoshii and Thermococcus funiculans, was
N4-bis(amino-propyl)spermidine. Hyperthermophilic Methanothermobacter fervidus
and Methanothermobacter kandleri contained spermidine, spermin and agmatine, and
sacked long and branched polyamines, suggesting that the distribution of
long and branched polyamines are not essential for thermophilic
methanogenesis.

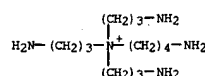
ACCESSION NUMBER: 1999:329098 CAPLUS
 DOCUMENT NUMBER: 131:113477
 TITLE: Polyamines of the thermophilic eubacteria belonging to the genera Aquifex, Thermodesulfobacterium, Thermus and Meiothermus, and the thermophilic archaeobacteria belonging to the genera Sulfolobus, Sulfolobococcus, Stetteria, Thermocodium, Pyrococcus, Thermococcus, Methanopyrus and Methanothermus
 AUTHOR (S): Hamana, K.; Hamana, H.; Shinozawa, T.; Niitsu, M.; Samejima, K.; Itoh, T.
 CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371-8514, Japan
 SOURCE: Microbios (1999), 97(387), 117-130
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (polyamines of thermophilic eubacteria and thermophilic archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanediol, 4-aminopropyl-N,N,N-tris(3-aminopropyl)- (SCI) (CA INDEX NAME



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L74 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
AB Cellular polyamines of several thermophilic subterbia and archaebacteria
were investigated by high performance liquid chromatog. and gas chromatog.
A hyperthermophilic eubacterium, Thermotoga maritima, contained a linear
pentaamine and a linear hexaamine. The moderate thermophiles, Thermotoga
elfii and Thermodesulfobrio yellowstonii contained a linear pentaamine.
A quaternary branched pentaamine, N4-bis(aminopropyl)spermidine, was the
major polyamine in extremely thermophilic Thermoplasma species. Long
linear and branched polyamines occurred in the extreme thermophiles,
Thermus and Rhodothermus, but were not detected in moderately thermophilic
Methococcus. In archaebacteria, linear pentaamines were distributed in
hyperthermophilic Aeropyrum. A moderately thermophilic hyperacidophile,
Picrophilus, contained spermidine and lacked longer amines.
N4-bis(aminopropyl)spermidine was found in a hyperthermophilic methanogen,
Methanococcus jannaschii, as a major polyamine, but not detected in
extremely/moderately thermophilic Methanococcus and Methanobacterium
species. This is the first report on the occurrence of quaternary
branched polyamine in methanogenic archaebacteria. The monomeric and
phylogenetic significance of the wide distribution of long linear and branched
polyamines possibly associated with their thermophily exist in the
thermophiles.

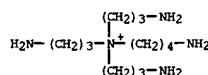
thermophililes.
ACCESSION NUMBER: 1998:645673 CAPLUS
DOCUMENT NUMBER: 129:145120
TITLE: Polyamines of the thermophilic eubacteria belonging to the genera Thermotoga, Thermodesulfobivrio, Thermopileum, Thermus, Rhodothermus and Meiothermus, and the thermophilic archaeobacteria belonging to the genera Aeropyrum, Picrophilus, Methanobacterium and Methanococcus
AUTHOR(S): Hamana, K.; Naito, M.; Samejima, K.; Itoh, T.; Hamana, H.; Shinozawa, A.
CORPORATE SOURCE: Gunma University School of Health Sciences, Gunma, 371, Japan
SOURCE: Microbios (1998), 93(377), 7-21
CODEN: MCBIA7; ISSN: 0026-2633
PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 143005-76-1
RI: BOC (Biological occurrence); BSU (Biological study, unclassified);
BL (Biological study); OCCU (Occurrence)
CN 143005-76-1 CAPLUS
RN 1-BUTANESPIRUM, 4-AMINO-N,N,N-TRIS(3-AMINOPROPYL)- (SCI) (CA INDEX NAME



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

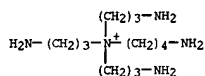
174 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
AB The five hyperthermophilic archaeobacteria located on the phylogenetically
divergent four orders of Archaeoglobales, Thermococcales, Thermoproteales
and Sulfolobales, resp., varied in their cellular polyamine components.
Archaeoglobus fulgidus and Archaeoglobus profundus contained two
quaternary branched penta-amines, N4-bis(aminopropyl) spermidine and
N4-bis(aminopropyl) spermine, as major polyamines in addition to
spermidine and spermine. Spermidine, spermine, a tertiary branched
tetra-amine, N4-aminopropylspermidine, and N4-bis(aminopropyl)spermidine
were the major polyamines and canavanine was the minor polyamine in
Thermococcus peptonophilus. Pyrobaculum aerophilum and Sulfolobus
hakonensis contained norspermidine, spermidine and norspermine as the
major polyamines but they lacked either branched or long linear
polyamines.

polyamines.
ACCESSION NUMBER: 1997:95001 CAPLUS
DOCUMENT NUMBER: 126183564
TITLE: Polyamines of hyperthermophilic archaeobacteria,
Archaeoglobus, Thermococcus, Pyrobaculum and
Sulfolobus
AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru;
Samejima, Keiichi; Itoh, Takashi
CORPORATE SOURCE: Coll. Med. Care Technology, Gunma Univ., Gunma, 371,
Japan
SOURCE: Microbios (1996), 87(351), 69-76
CODEN: MCBIA7; ISSN: 0026-2633
PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 143085-76-1
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)
* (polyamines of hyperthermophilic archaeobacteria, Archaeoglobus,
Thermococcus, Pyrobaculum and Sulfolobus)
RN 143085-76-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



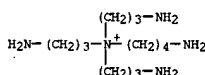
L74 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of the seeds, seedlings, and some other tissues of 15 leguminous plants were analyzed by high performance liquid chromatog. and gas chromatog. A novel tertiary branched pentaamine, N5-aminobutylhomospermine, was detected in the seed of *Vicia villosa* and another novel quaternary branched pentaamine, N4-bis(aminopropyl)spermidine, in the seed of *Crotalaria spectabilis*. Norspermine and a novel linear pentaamine, caldopentamine, were found in the seed of *Gleditsia japonica*. Other unusual polyamines such as norspermidine, homospermidine, thermospermine, N4-methylthermospermine, homospermine, and N-(3-aminopropyl)aminopropanol occur widely within leguminous seeds. Nine groups of plant response were found with respect to increases of diaminopropane, putrescine, cadaverine, and agmatine in the leguminous seedlings after germination.

ACCESSION NUMBER: 1997:8218 CAPLUS
 DOCUMENT NUMBER: 126:72607
 TITLE: Further polyamine analyses of leguminous seeds and seedlings: the occurrence of novel linear, tertiary branched and quaternary branched pentaamines
 AUTHOR(S): Hamana, Koei; Niitsu, Masaru; Samejima, Keijiro
 CORPORATE SOURCE: College of Medical Care and Technology, Gunma University, Gunma, 371, Japan
 SOURCE: Canadian Journal of Botany (1996), 74(11), 1766-1772
 CODEN: CJBQAW; ISSN: 0008-4026
 PUBLISHER: National Research Council of Canada
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (polyamine anal. of leguminous seeds and seedlings)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



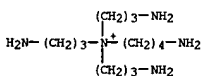
L74 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of seventeen strains of thermophilic Gram-pos. anaerobes belonging to seven genera of clostridia were analyzed by high-performance liquid chromatog. and gas chromatog. *Caldicellulosiruptor* contained spermidine, spermine, thermospermine, thermopentamine, two tertiary branched tetraamines (N4-aminopropylspermidine and N4-aminopropylhomospermidine) and two quaternary branched pentaamines [N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine]. The major polyamines of *Caloramator*, *Coprothermobacter*, *Moorella*, *Thermoanaerobacter*, *Thermoanaerobacterium* and thermophilic *Clostridium* were putrescine, spermidine and spermine. N4-aminopropylspermidine and N4-bis(aminopropyl)spermidine were found as minor polyamines in some cultures of *Moorella* and *Thermoanaerobacter*.

ACCESSION NUMBER: 1996:423666 CAPLUS
 DOCUMENT NUMBER: 125:81445
 TITLE: Polyamines of thermophilic Gram-positive anaerobes belonging to the genera *Caldicellulosiruptor*, *Caloramator*, *Clostridium*, *Coprothermobacter*, *Moorella*, *Thermoanaerobacter* and *Thermoanaerobacterium*
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keijiro
 CORPORATE SOURCE: Coll. Medical Care Technol., Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 85(345), 213-222
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (polyamines of thermophilic Gram-pos. anaerobes)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



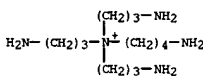
L74 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of thermophilic archaeobacteria and hyperthermophilic archaeobacteria were analyzed by high-performance liquid chromatog. and gas chromatog. Thermotoga, Pyrodictum, Feravidobacterium and Dictyoglomus contained tetraamines such as spermine, norspermine and thermospermine, penta-amines such as caldopentamine, homocaldopentamine and thermopentamine, and a hexa-amine, caldohexamine. These linear polyamines and the quaternary branched pentaamines, N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)norspermidine were found in *Thermoanaerobacter cellulolyticus*. N4-bis(aminopropyl)spermidine, spermidine and spermine were the polyamine components of the other authentic *Thermoanaerobacter* species. The main polyamine of *Thermodesulfobacterium commune* was N4-bis(aminopropyl)spermidine. In archaeobacteria, an unusual triamine, homospermidine, occurred in *Desulfurococcus* and *Staphylothermus*. Caldopentamine, thermopentamine and caldohexamine were detected in *Pyrodictum*, *Hyperthermus* and *Staphylothermus*. *Thermoproteus* and *Pyrobaculum* contained tri- and tetra-amines but lacked long linear and branched polyamines. The long linear and branched polyamines are widely distributed in thermophilic eubacteria and archaeobacteria and are chemotaxonomically useful in the thermophiles.

ACCESSION NUMBER: 1996:393216 CAPLUS
 DOCUMENT NUMBER: 125:53207
 TITLE: Distribution of long linear and branched polyamines in thermophilic eubacteria and hyperthermophilic archaeobacteria
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keijiro; Itoh, Takashi
 CORPORATE SOURCE: Coll. Medical Care Technol., Gunma Univ., Gunma, 371, Japan
 SOURCE: Microbios (1996), 85(342), 19-33
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Faculty Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (distribution of long linear and branched polyamines in thermophilic eubacteria and hyperthermophilic archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



L74 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Polyamines of thermophilic archaeobacteria were analyzed by HPLC and gas chromatog. *Thermoplasma acidophilum* and *Thermoplasma volcanium* ubiquitously contained spermidine and spermine. Four spp. of *Sulfolobus*, *S. acidocaldarius*, *S. solfataricus*, *S. metallicus*, and *S. shibatae*, 2 spp. of *Acidianus*, *A. brierleyi* and *A. infernus*, and *Metallosphaera sedula* contained norspermidine and norspermine in addition to spermidine and spermine, but quant. distribution profiles were species-specific. A tertiary tetraamine, N4-aminopropylspermidine, and a quaternary pentaamine, N4-bis(aminopropyl)spermidine, were detected as major polyamines in 3 spp. of *Thermococcus*, *T. celer*, *T. litoralis*, and *T. stetteri*, and 2 *Pyrococcus* spp., *P. furiosus* and *P. woesei*. This is the 1st report of the occurrence of branched polyamines in archaeobacteria.

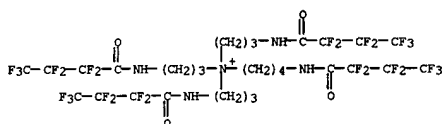
ACCESSION NUMBER: 1995:82668 CAPLUS
 DOCUMENT NUMBER: 122:5033
 TITLE: Occurrence of tertiary and quaternary branched polyamines in thermophilic archaeobacteria
 AUTHOR(S): Hamana, Koei; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keijiro; Sakane, Takeshi; Yokota, Akira
 CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan
 SOURCE: Microbios (1994), 79(319), 109-19
 CODEN: MCBIA7; ISSN: 0026-2633
 PUBLISHER: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (tertiary and quaternary branched polyamines in thermophilic archaeobacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



L74 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

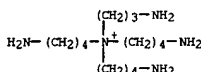
AB Using heptafluorobutyl derivs. of 27 linear di-, tri-, tetra-, penta- and hexamines containing various sets of isomers, and 4 tertiary tetraamines and 5 quaternary pentaamines, mostly with 3 or 4 methylene chain units, their gas chromatog. (GC) and gas chromatog.-mass spectrometric (GC-MS) properties were compared and examined. Several results useful for their systematic anal. were found: assured baseline separation of 1 methylene difference in linear di- and polyamines and tertiary tetraamines by GC; distinct pyrolytic decomposition patterns of quaternary pentaamines by GC; distinct cleavage patterns of 3 or 4 methylene chain units by GC-MS; and distinct mass spectra of linear polyamines and tertiary tetraamines by GC-MS.

ACCESSION NUMBER: 1993:551383 CAPLUS
DOCUMENT NUMBER: 119:151383
TITLE: Systematic analysis of naturally occurring linear and branched polyamines by gas chromatography and gas chromatography-mass spectrometry
AUTHOR(S): Niitsu, Masaru; Samejima, Keijiro; Matsuzaki, Shigeru; Hamana, Koei
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Josai University, 1-1 Keyakidai, Sakado, Saitama, 350-02, Japan
SOURCE: Journal of Chromatography (1993), 641(1), 115-23
CODEN: JOCRAH; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 149981-89-5 149981-90-8 149981-91-9
RL: ANT (Analyte); ANST (Analytical study)
(gas chromatog. and mass spectrometry of)
RN 149981-89-5 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N,N-tris[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)

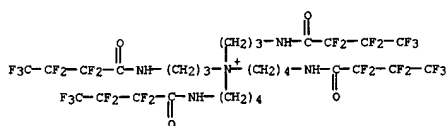


RN 149981-90-8 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N-[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]-N,N-bis[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)

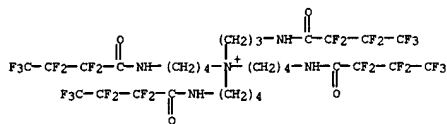
L74 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



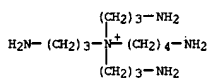
L74 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



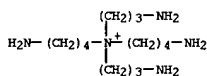
RN 149981-91-9 CAPLUS
CN 1-Butanaminium, 4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-N,N-bis[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]butyl]-N-[3-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]propyl]- (9CI) (CA INDEX NAME)



IT 143085-76-1 143085-77-2 148275-76-7
RL: FRP (Properties); ANST (Analytical study)
(gas chromatog.-mass spectrometry of, as heptafluorobutyl derivative)
RN 143085-76-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-77-2 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)

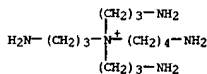


RN 148275-76-7 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)- (9CI) (CA INDEX NAME)

L74 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

AB Tertiary tetraamines and quaternary pentaamines composed of aminopropyl and/or aminobutyl groups were synthesized as authentic samples for the identification of naturally occurring branched polyamines. Four tertiary tetraamines, including [H₂N(CH₂)_n]₃N⁺·4HCl (n = 3, 4) and [H₂N(CH₂)₃]₂N(CH₂)₄NH₂·HCl, were obtained by alkylating the free secondary amine group of dipthaloyl derivs. of sym-norspermidine or sym-homospermidine with N-(3-bromopropyl)phthalimide or N-(4-bromobutyl)phthalimide in the presence of KF-Celite. Five quaternary pentaamines, e.g., [H₂N(CH₂)_n]₄N⁺·4HCl (n = 3, 4), were obtained by fusing triphthaloyl derivs. of the tertiary tetraamines with an excess amount of N-(3-iodopropyl)phthalimide or N-(4-iodobutyl)phthalimide. The present methods are simple and achieved high yields. The ¹³C-NMR spectra of these branched polyamines were recorded in D₂O as fully protonated forms, and all ¹³C chemical shifts were assigned consistently.

ACCESSION NUMBER: 1993:427654 CAPLUS
DOCUMENT NUMBER: 119:27654
TITLE: Syntheses of tertiary tetraamines and quaternary pentaamines with three and four methylene chain units
AUTHOR(S): Niitsu, Masaru; Sano, Hiroo; Samejima, Keijiro
CORPORATE SOURCE: Fac. Pharm. Sci., Josai Univ., Sakado, 350-02, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1992), 40(11), 2958-61
CODEN: CPBTAJ; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 119:27654
IT 148275-61-0P 148275-62-1P 148275-63-2P
148275-70-1P 148275-78-9P 148275-80-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 148275-61-0 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)

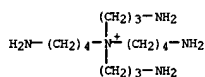


● Cl⁻

● 4 HCl

RN 148275-62-1 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)

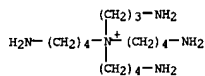
L74 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● C1-

● 4 HCl

RN 148275-63-2 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)-, chloride, tetrahydrochloride (9CI) (CA INDEX NAME)



● C1-

● 4 HCl

RN 148275-70-1 CAPLUS
CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)-, perchlorate, tetraerchlorate (9CI) (CA INDEX NAME)

CM 1

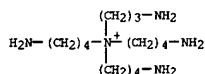
CRN 7601-90-3
CMF C1 H 04



CM 2

CRN 148275-69-8

L74 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CM 4

CRN 14797-73-0
CMF C1 04



RN 148275-80-3 CAPLUS
CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)-, perchlorate, tetraerchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H 04

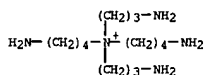


CM 2

CRN 148275-79-0
CMF C14 H36 N5 . C1 04

CM 3

CRN 143085-77-2
CMF C14 H36 N5

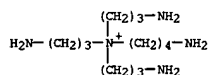


L74 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CMF C13 H34 N5 . C1 04

CM 3

CRN 143085-76-1
CMF C13 H34 N5



CM 4

CRN 14797-73-0
CMF C1 04



RN 148275-78-9 CAPLUS
CN 1-Butanaminium, 4-amino-N,N-bis(4-aminobutyl)-N-(3-aminopropyl)-, perchlorate, tetraerchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF C1 H 04



CM 2

CRN 148275-77-8
CMF C15 H38 N5 . C1 04

CM 3

CRN 148275-76-7
CMF C15 H38 N5

L74 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

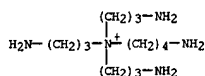
CM 4

CRN 14797-73-0
CMF C1 04



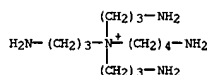
L74 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Polyamines of thermophilic gram-neg. eubacteria, *Rhodothermus marinus* ATCC 43812, *Thermus* sp. ATCC 43814, and *Thermomonas lapaum* ATCC 43542 were analyzed by HPLC and gas chromatog.-mass spectrometry. *R. marinus* contained spermidine, spermine, thermopentamine, a tertiary tetraamine (N4-aminopropylspermidine), and a quaternary pentaamine (N4-bis(aminopropyl)spermidine). *Thermus* sp. ATCC 43814 contained putrescine, cadaverine, norspermidine, spermidine, homospermidine, norspermine, spermine, thermospermine, aminopropylhomospermidine, caldopentamine, agmatine, 2 tertiary tetraamines (N4-aminopropylhomospermidine and N4-aminopropylspermidine), and 2 quaternary pentaamines (N4-bis(aminopropyl)spermidine and N4-bis(aminopropyl)spermidine). Homospermidine and homospermine were detected in *T. lapaum* as the major polyamine. These distribution patterns of long and branched polyamines are distinctive in the thermophiles, indicating that unusual polyamine profiles serve to estimate chemotaxonomic and phylogenetic relations within thermophilic eubacteria.

ACCESSION NUMBER: 1993:251160 CAPLUS
 DOCUMENT NUMBER: 118:251160
 TITLE: Distribution of unusual long and branched polyamines in thermophilic eubacteria belonging to "Rhodothermus," *Thermus* and *Thermomonas*
 AUTHOR(S): Hamana, Koel; Hamana, Hiroshi; Niitsu, Masaru; Samejima, Keijiro; Matsuzaki, Sigeru
 CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan
 SOURCE: Journal of General and Applied Microbiology (1992), 38(6), 575-84
 CODEN: JGAMA9; ISSN: 0022-1260
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1
 RL: BIOL (Biological study)
 (of thermophilic eubacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)

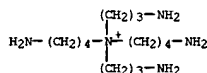


L74 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Novel tertiary branched tetraamines, quaternary branched pentaamines, linear pentaamines, and linear hexaamines were distributed as the major polyamines in 6 obligately extremely thermophilic eubacteria belonging to *Thermoleophilum*, *Bacillus*, or *Hydrogenobacter*. The major polyamine of *T. album* and *T. mutans* was identified as a quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane (NH₂(CH₂)₃N⁺[(CH₂)₄NH₂]₂(CH₂)₄NH₂) by HPLC, TLC, and gas chromatog.-mass spectrometry. *H. thermophilus* and *H. halophilus* contained another quaternary branched pentaamine, 4,4-bis(3-aminopropyl)-1,7-diamino-4-azaheptane as the major polyamine, and tertiary branched tetraamines (4-(3-aminopropyl)-1,7-diamino-4-azaheptane; 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, and 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane were confirmed as minor components. *B. schlegelii* contained a branched tetraamine, 4-(3-aminopropyl)-1,8-diamino-4-azaoctane, a branched pentaamine, 4,4-bis(3-aminopropyl)-1,8-diamino-4-azaoctane, a linear pentaamine, 1,16-diamino-4,8,13-triazahexadecane and linear hexaamine(s), 1,20-diamino-4,8,12,17-tetraazaeicosane and/or 1,20-diamino-4,8,13,17-tetraazaeicosane.

ACCESSION NUMBER: 1992:567247 CAPLUS
 DOCUMENT NUMBER: 117:167247
 TITLE: Novel linear and branched polyamines in the extremely thermophilic eubacteria *Thermoleophilum*, *Bacillus* and *Hydrogenobacter*
 AUTHOR(S): Hamana, Koel; Niitsu, Masaru; Matsuzaki, Sigeru; Samejima, Keijiro; Igarashi, Yasuo; Kodama, Tooru
 CORPORATE SOURCE: Coll. Med. Care Technol., Gunma Univ., Maebashi, 371, Japan
 SOURCE: Biochemical Journal (1992), 284(3), 741-7
 CODEN: BIJOAK; ISSN: 0306-3275
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 143085-76-1 143085-77-2
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (of thermophilic bacteria)
 RN 143085-76-1 CAPLUS
 CN 1-Butanaminium, 4-amino-N,N,N-tris(3-aminopropyl)- (9CI) (CA INDEX NAME)



RN 143085-77-2 CAPLUS
 CN 1-Butanaminium, 4-amino-N-(4-aminobutyl)-N,N-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)



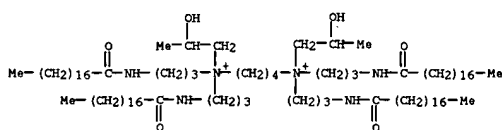
L74 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)

L74 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2005 ACS ON STN
 AB Stearic acid (I), behenic acid, or oleic acid is condensed with dipropyleneetriamine (II) or diethylenetriamine, treated with propylene oxide (III), with acrylamide, or with HCHO and HCO₂H, and then treated with Cl(CH₂)₄Cl, dichlorodimethyl ether, Br(CH₂)₁₀Br, or p-xylylene dichloride to prepare quaternary amines useful as softeners for cotton, polyamide, polyester, and other textiles and for paper. In 2 cases, the quaternary amines are treated with Na pentachlorophenolate or methylenebis(chlorophenol) to prepare antimicrobial softeners. Thus, 1620 parts I is condensed at 200.deg. with 393 parts II, treated (250 parts) with 30 parts III during 5 hr at 90.deg., and treated (70 parts) with 19 parts Cl(CH₂)₄Cl during 30 min at 150.deg. to prepare a softener for cotton textiles.

ACCESSION NUMBER: 1972:490405 CAPLUS
 DOCUMENT NUMBER: 77:90405
 TITLE: Polyamide ammonium compounds for finishing textiles
 INVENTOR(S): Hochreuter, Richard
 PATENT ASSIGNER(S): Sandoz Ltd.
 SOURCE: Ger. Offen., 32 pp.
 CODEN: GWXXEX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

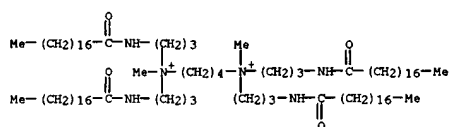
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2150225	A	19720608	DE 1971-2150225	19711008
CH 553150	A	19740830	CH 1970-14902	19701009
US 3793352	A	19740219	US 1971-186507	19711004
AU 7134293	A1	19730412	AU 1971-34293	19711006
ES 395812	A1	19741016	ES 1971-395812	19711007
GB 1377216	A	19741211	GB 1971-46765	19711007
FR 2111168	A5	19720602	FR 1971-36303	19711008
IT 945769	A	19730510	IT 1971-70303	19711008
			CH 1970-14902	A 19701009

PRIORITY APPL. INFO.:
 IT 38471-55-5 38471-57-7 38471-95-3
 RL: USES (Uses)
 (softening agents, for textiles)
 RN 38471-55-5 CAPLUS
 CN 1,4-Butanediaminium, N,N'-bis(2-hydroxypropyl)-N,N',N'-tetrakis[3-[(1-oxooctadecyl)amino]propyl]-, dichloride (9CI) (CA INDEX NAME)



● 2 Cl⁻

RN 38471-57-7 CAPLUS

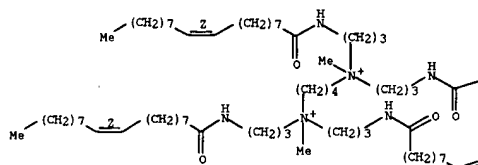


● 2 Cl⁻

RN 38471-95-3 CAPLUS
 CN 1,4-Butanediaminium, N,N'-dimethyl-N,N,N',N'-tetrakis[3-[(1-oxo-9-octadecenyl)amino]propyl]-, dichloride, (all-Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



● 2 Cl⁻

=> fil reg
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
85.33	3678.25

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-12.41	-62.78

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FILE 'REGISTRY' ENTERED AT 17:57:38 ON 19 APR 2005
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STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

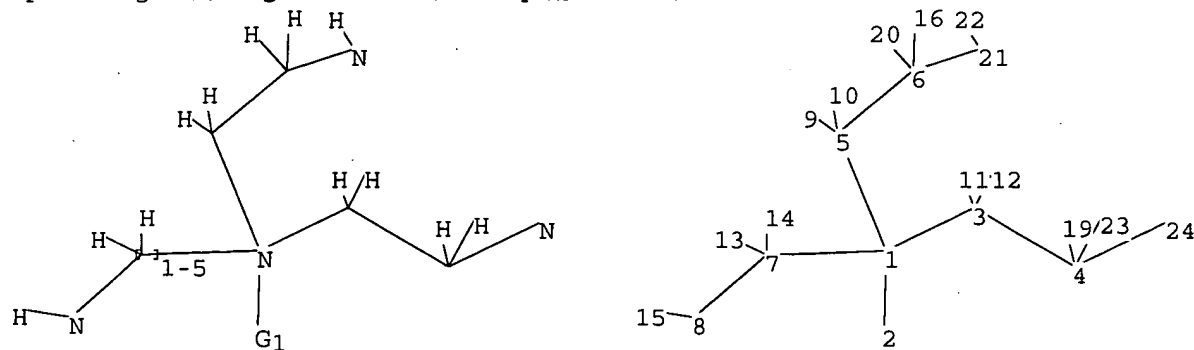
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>
Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24
 chain bonds :
 1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
 6-21 7-8 7-13 7-14 8-15 21-22
 exact/norm bonds :
 1-2 1-3 1-5 1-7 4-24 6-21 7-8
 exact bonds :
 3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

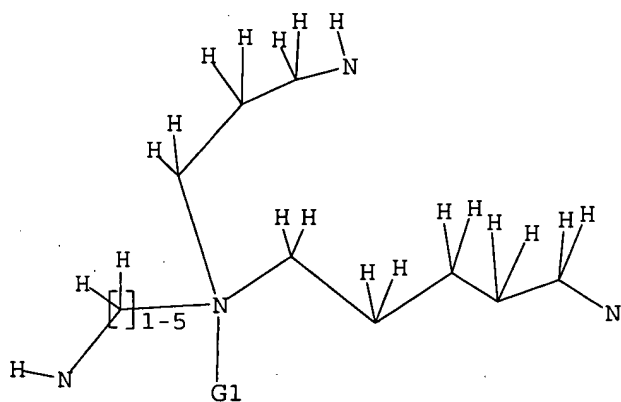
G1:C,H

Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L75 STRUCTURE UPLOADED

=> d query

L75 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 175

SAMPLE SEARCH INITIATED 17:58:17 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 903 TO ITERATE

100.0% PROCESSED 903 ITERATIONS
 SEARCH TIME: 00.00.02

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 16258 TO 19862

PROJECTED ANSWERS: 0 TO 0

L76 0 SEA SSS SAM L75

=> s l75 full

FULL SEARCH INITIATED 17:58:22 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 17754 TO ITERATE

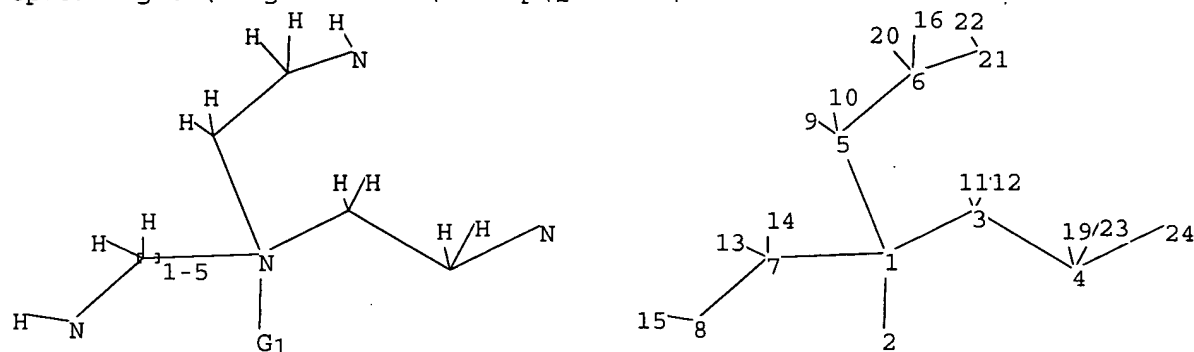
100.0% PROCESSED 17754 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L77 0 SEA SSS FUL L75

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

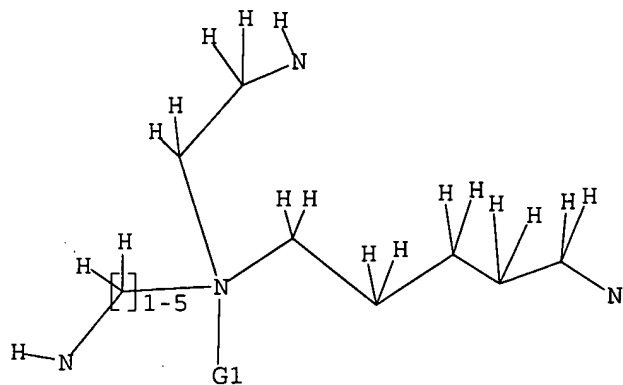
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L78 STRUCTURE UPLOADED

=> d query

L78 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s 178

SAMPLE SEARCH INITIATED 17:58:57 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 2541 TO ITERATE

39.4% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 47797 TO 53843
PROJECTED ANSWERS: 0 TO 0

L79 0 SEA SSS SAM L78

=> s 178 full

FULL SEARCH INITIATED 17:59:01 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 49370 TO ITERATE

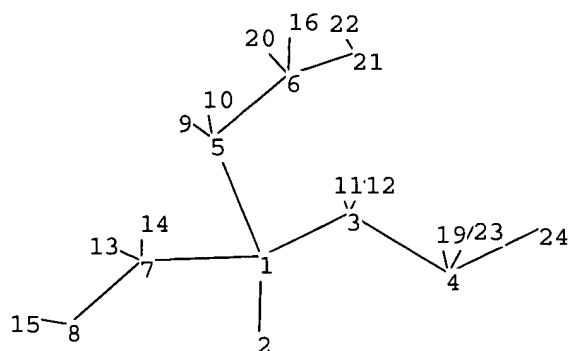
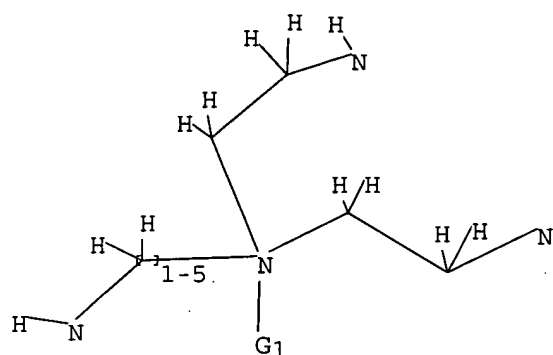
100.0% PROCESSED 49370 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L80 0 SEA SSS FUL L78

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

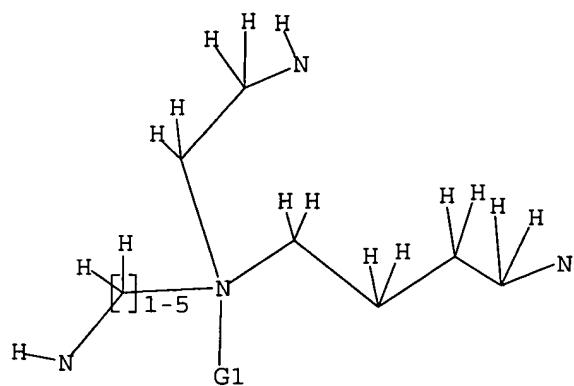
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
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20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L81 STRUCTURE UPLOADED

=> d query

L81 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s l81

SAMPLE SEARCH INITIATED 17:59:37 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1290 TO ITERATE

77.5% PROCESSED 1000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 23646 TO 27954
PROJECTED ANSWERS: 0 TO 0

L82 0 SEA SSS SAM L81

=> s l81 full

FULL SEARCH INITIATED 17:59:41 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 25361 TO ITERATE

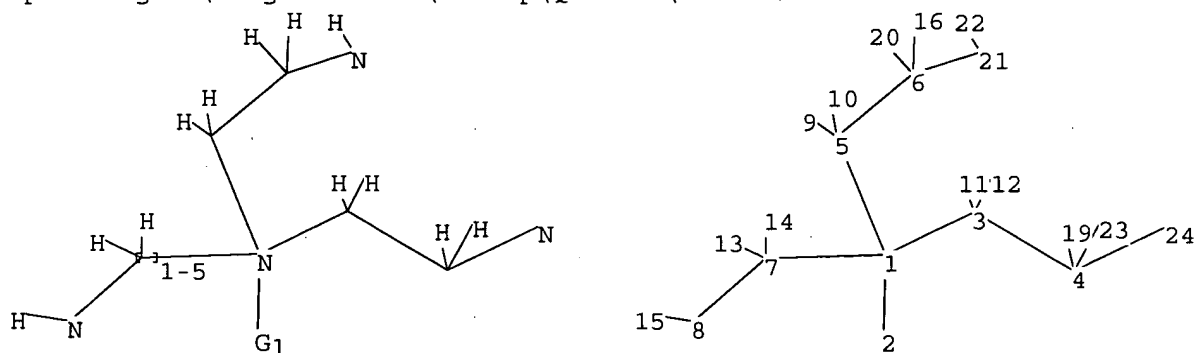
100.0% PROCESSED 25361 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L83 0 SEA SSS FUL L81

=>

Uploading C:\Program Files\Stnexp\Queries\10005294.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 19 20 21 22 23 24

chain bonds :

1-2 1-3 1-5 1-7 3-4 3-11 3-12 4-19 4-23 4-24 5-6 5-9 5-10 6-16 6-20
6-21 7-8 7-13 7-14 8-15 21-22

exact/norm bonds :

1-2 1-3 1-5 1-7 4-24 6-21 7-8

exact bonds :

3-4 3-11 3-12 4-19 4-23 5-6 5-9 5-10 6-16 6-20 7-13 7-14 8-15 21-22

G1:C,H

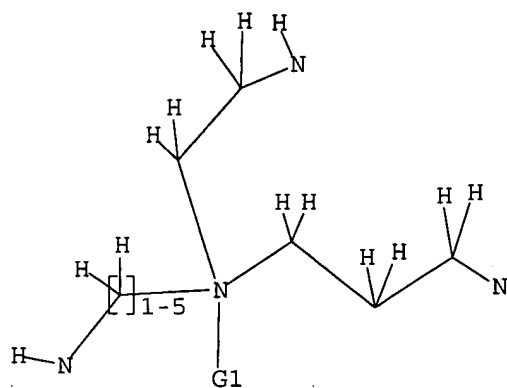
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
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 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L84 STRUCTURE UPLOADED

=> d query

L84 STR



G1 C, H

Structure attributes must be viewed using STN Express query preparation.

=> s l84

SAMPLE SEARCH INITIATED 18:00:25 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 1544 TO ITERATE

64.8% PROCESSED 1000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

1 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 28523 TO 33237
 PROJECTED ANSWERS: 1 TO 104

L85 1 SEA SSS SAM L84

=> s l84 full

FULL SEARCH INITIATED 18:00:30 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 30327 TO ITERATE

100.0% PROCESSED 30327 ITERATIONS
 SEARCH TIME: 00.00.01

11 ANSWERS

L86 11 SEA SSS FUL L84

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
FULL ESTIMATED COST	ENTRY	SESSION
	645.75	4324.00
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY	SESSION
	0.00	-62.78

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 FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 186

L87 5 L86

=> d 187 1-5 abs ibib hitstr

IT 389132-33-6P
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (polymer formation in presence of nucleic acid using template polymerization)
 RN 389132-33-6 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with dimethyl 3,3'-dithiobis[propanimidate] and $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediyl]bis[(2-ami noethyl) nitrilo]bis[3,1-propanediyl]imino(3-oxo-3,1-propanediyl)]]] tetrakis[α -hydroxypropyl(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2), sodium salt (9CI) (CA INDEX NAME)
 CN 1

$$\text{Me}-\overset{\text{CH}_2}{\underset{\text{||}}{\text{C}}}-\text{CO}_2\text{H}$$

CM 4

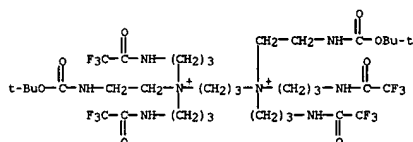
CRN 210292-30-1
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2

CM 5

CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI PMS

$$\text{HO} - \left[\text{CH}_2 - \text{CH}_2 - \text{O} \right]_n - \text{CH}_2 - \text{CH}_2 - \text{C}(=\text{O}) - \text{NH} - (\text{CH}_2)_3 - \text{N}^+ (\text{CH}_2)_3 - \text{N}^+ (\text{CH}_2)_3$$
$$\begin{array}{l} \text{---NH---}\overset{\overset{\text{O}}{\parallel}}{\text{C}}\text{---CH}_2\text{---CH}_2\text{---}\left[\text{O---CH}_2\text{---CH}_2\right]_n\text{OH} \\ \text{---(CH}_2\text{)}_3\text{---NH---}\overset{\overset{\text{O}}{\parallel}}{\text{C}}\text{---CH}_2\text{---CH}_2\text{---}\left[\text{O---CH}_2\text{---CH}_2\right]_n\text{OH} \\ \text{---CH}_2\text{---NH}_2 \end{array}$$
$$\begin{array}{c} \text{F} \\ | \\ \text{F}-\text{C}-\text{CO}_2^- \\ | \\ \text{F} \end{array}$$

IT 210292-26-5P 210292-28-7P 210292-30-1P
 RL: RCT (Reactant); SFN (Synthetic Preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (polymer formation in presence of nucleic acid using template
 polymerization)
 RN 210292-26-5 CAPLUS
 CN 1,3-bis[spandianilino, N,N'-bis[2-[[[1,1-dimethylethoxy]carbonyl]amino]ethy
 l-3-[[[2,2,2-trifluoroethyl]amino]propyl]-, dibromide (SCI
 CA, INDEX NAME)

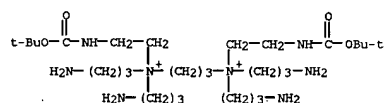


●2 Br⁻

RN 210292-28-7 CAPLUS
CN 1,3-Propanediaminium, N,N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[[1,1-dimethylethoxy]carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

L87 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CM 1

CRM 210292-27-6
CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6

CMF C2 F3 O2



```

RN      210292-30-1  CAPLUS
CN      Poly(oxy-1,2-ethanediyl),  $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-
        propanediylbis[{{(2-aminoethyl)nitriilo}bis[3,1-propanediylimino(3-oxo-3,1-
        propanediyl)}]]tetrakis[ $\alpha$ -hydroxy-, salt with trifluoroacetic acid
        (1:2) (9CI)  (CA INDEX NAME)

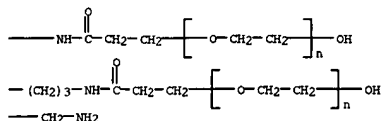
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CRN     210292-29-8
CMF     (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
CCT     PMS

```

$$\text{HO} \left[\text{CH}_2 - \text{CH}_2 - \text{O} \right]_n \text{CH}_2 - \text{CH}_2 - \text{C}(=\text{O}) - \text{NH} - (\text{CH}_2)_3 - \text{N}^+ (\text{CH}_2)_3 - \text{N}^+ (\text{CH}_2)_3 \text{CH}_2 - \text{C}(=\text{O}) - \text{NH} - (\text{CH}_2)_3$$

PAGE 1-B



CM 2

CRN 14477-72-6
CMF C2 F3 O2

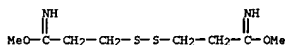
IT 389132-31-4P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

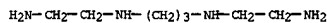
RN 389132-31-4 CAPLUS

CN Propanimidic acid, 3,3'-dithiobis-, dimethyl ester, polymer with N,N'-bis(2-aminoethyl)-1,3-propanediamine and $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[(2-aminoethyl)nitri]o]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α -hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 59012-54-3
CMF C8 H16 N2 O2 S2

CM 2

CRN 4741-99-5
CMF C7 H20 N4L87 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

CM 3

CRN 210292-30-1

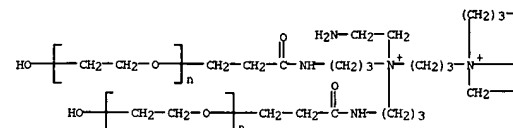
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CM 4

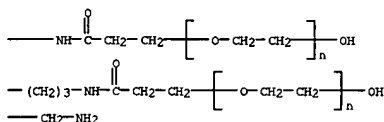
CRN 210292-29-8

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CCI PMS

PAGE 1-A



PAGE 1-B



CM 5

CRN 14477-72-6
CMF C2 F3 O2

L87 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AB Polymers are formed in the presence of nucleic acid using template polymerization

Also, polymerization occurs in heterophase systems. These methods can be used

for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. Step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

ACCESSION NUMBER: 1999:708870 CAPLUS

DOCUMENT NUMBER: 131:327545

TITLE: Polymer formation in the presence of nucleic acid using template polymerization

INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.

PATENT ASSIGNEE(S): Mirus Corporation, USA

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXKD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

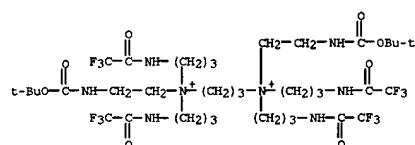
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WO 9955825	A1	19991104	WO 1999-US8965	19990423
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RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1073707	A1	20010207	EP 1999-920014	19990423
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				
PRIORITY APPLN. INFO.:			US 1998-70299	A 19980430
			WO 1999-US8965	W 19990423

IT 210292-26-5P 210292-28-7P 210292-30-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polymer formation in the presence of nucleic acid using template polymerization)

RN 210292-26-5 CAPLUS

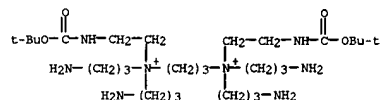
CN 1,3-Propanediamine, N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethoxy]-N,N,N',N'-tetrakis[3-[(trifluoroacetyl)amino]propyl]-, dibromide (9CI) (CA INDEX NAME)

● 2 Br⁻

RN 210292-28-7 CAPLUS
 CN 1,3-Propanediaminium, N,N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[[1,1-dimethylethoxy]carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 210292-27-6
 CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6
 CMF C2 F3 O2

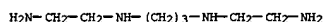


RN 210292-30-1 CAPLUS
 CN Poly(oxy-1,2-ethanediyl), α,α',α'',α'''-[1,3-propanediylbis[[[(2-aminoethyl) nitrilo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α-hydroxy]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CM 1

CRN 4741-99-5
 CMF C7 H20 N4



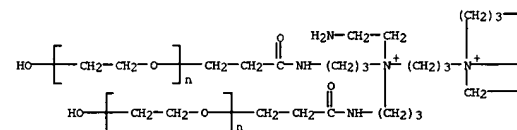
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CRN 210292-30-1
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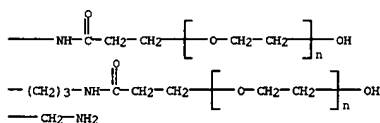
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CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI PMS

PAGE 1-A



PAGE 1-B

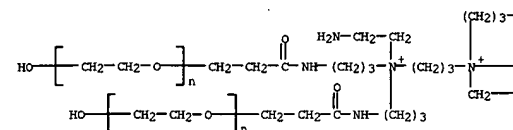


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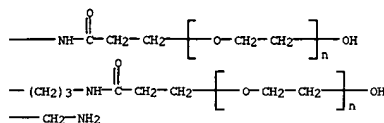
CRN 14477-72-6
 CMF C2 F3 O2

CRN 210292-29-8
 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8
 CCI PMS

PAGE 1-A



PAGE 1-B



CM 2

CRN 14477-72-6
 CMF C2 F3 O2



IT 248915-96-0P

RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(polymer formation in the presence of nucleic acid using template polymerization)

RN 248915-96-0 CAPLUS

CN 1,3-Propanediamine, N,N'-bis(2-aminoethyl)-, polymer with α,α',α'',α'''-[1,3-propanediylbis[[[(2-aminoethyl) nitrilo]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[α-hydroxypoly(oxy-1,2-ethanediyl)]] salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AB The self-assembly of supramol. complexes of nucleic acids and polymers is of relevance to several biol. processes including viral and chromatin formation as well as gene therapy vector design. We now show that template polymerization facilitates condensation of DNA into particles that

are <150 nm in diameter. Inclusion of a poly(ethylene glycol)-containing monomer prevents aggregation of these particles. The DNA within the particles remains biol. active and can express foreign genes in cells. The formation or breakage of covalent bonds has until now not been employed to compact DNA into artificial particles.

ACCESSION NUMBER: 1998:648382 CAPLUS

DOCUMENT NUMBER: 130:21826

TITLE: Self-assembly of DNA-polymer complexes using template polymerization

AUTHOR(S): Trubetskoy, Vladimir S.; Budker, Vladimir G.; Hanson, Lisa J.; Slattum, Paul M.; Wolff, Jon A.; Hagstrom, James E.

CORPORATE SOURCE: Mirus Corporation, Madison, WI, 53711, USA

SOURCE: Nucleic Acids Research (1998), 26(18), 4178-4185

CODEN: NARHAD; ISSN: 0305-1048

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 210292-30-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of monomers to study self-assembly of DNA-polymer complexes using template polymerization)

RN 210292-30-1 CAPLUS

CN Poly(oxy-1,2-ethanediyl), a,a',a'',a'''-[1,3-propanediylbis[[[(2-aminoethyl)nitri]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[a-hydroxy-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

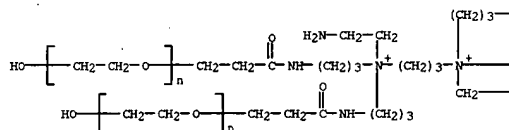
CM 1

CRN 210292-29-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8

CCI PMS

PAGE 1-A



L87 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AB A method of making a compound for delivery to a cell comprising forming a polymer in the presence of a biol. active drug is disclosed. A method of forming polymers in the presence of nucleic acid using template polymerization

and of having the polymerization occur in heterophase systems is further disclosed. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid-binding polymers, for forming supramol. complexes containing nucleic acid and polymer,

and for forming an interpolyelectrolyte complex. The nuclear localizing peptide of SV40 T antigen was copolymerized with dithiobis[succinimidylpropionate] in the presence of plasmid DNA and this process enabled the formation of complexes that expressed luciferase after transfection into 3T3 cells in culture.

ACCESSION NUMBER: 1998:485169 CAPLUS

DOCUMENT NUMBER: 129:118754

TITLE: Method for making a compound for delivery to cells by forming a polymer in the presence of a template drug, especially nucleic acid

INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetskoy, Vladimir S.; Slattum, Paul M.; Hanson, Lisa J.

PATENT ASSIGNEE(S): Mirus Corp., USA

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

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WO 9829541	A1	19980709	WO 1997-US24089	19971230
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US 6126964	A	20001003	US 1997-778657	19970103
EP 958356	A1	19991124	EP 1997-954803	19971230
RU: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				
US 2002061287	A1	20020523	US 2001-4763	20011205
US 2002085989	A1	20020704	US 2001-5294	20011205
US 2004161463	A1	20040819	US 2004-755785	20040112
PRIORITY APPL. INFO.:				
			US 1997-778657	A 19970103
			US 1996-95938	P 19960104
			WO 1997-US24089	W 19971230
			US 1999-464871	A3 19991216
			US 2001-993216	A3 20011116

OTHER SOURCE(S): MARPAT 129:118754

IT 210292-26-5P 210292-28-7P 210292-30-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

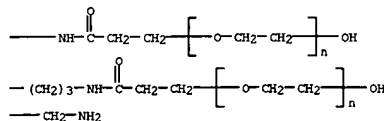
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CN 1,3-Propanediaminium, N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-N,N,N',N'-tetrakis[3-[[trifluoroacetyl]amino]propyl]-, dibromide (9CI) (CA INDEX NAME)

L87 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)

PAGE 1-B



CM 2

CRN 14477-72-6

CMF C2 F3 O2



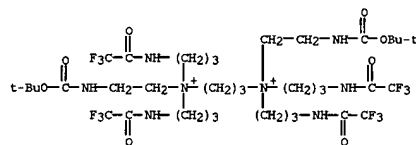
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L87 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)



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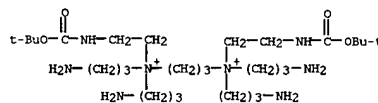
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CN 1,3-Propanediaminium, N,N,N',N'-tetrakis[3-aminopropyl]-N,N'-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

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CRN 210292-27-6

CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6

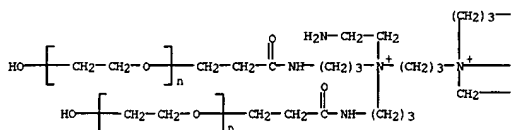
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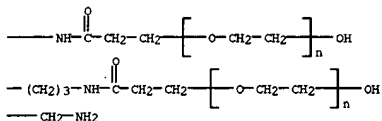
RN 210292-30-1 CAPLUS

CN Poly(oxy-1,2-ethanediyl), a,a',a'',a'''-[1,3-propanediylbis[[[(2-aminoethyl)nitri]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[a-hydroxy-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1



PAGE 1-B



CRN 14477-72-6
CMF C2 F3 02

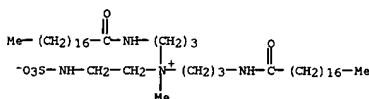


137 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS ON STN
 138 R2R1N+CH2CH2NMX- (I; R, R1 = H, alkyl; X = SO2, SO3) were prepared by
 139 reaction of NR2R1-SO2 or NR2R1-SO3 addition compds. with aziridine. Thus,
 140 parts SO2 was passed into a solution containing 36.5 parts BuNH2 in 150
 141 parts C6H6 at 20-25° and 21.5 part aziridine added slowly at 30-40°
 142 to give 63.3% I (R = H, R1 = Bu, X = SO2). Similarly prepared were 17 other
 143 I.

ACCESSION NUMBER: 1971:509827 CAPLUS
DOCUMENT NUMBER: 75:109827
TITLE: Ammonium betaines
INVENTOR(S): Distler, Harry; Widder, Rudi
PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik AG
SOURCE: Ger. Offen., 15 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1963399	A	19710624	DE 1969-1963399	19691218
US 3741198	A	19730626	US 1970-96270	19701208
NL 7018343	A	19710622	NL 1970-18343	19701216
FR 2073824	A5	19711001	FR 1970-45308	19701216
JP 48037019	B4	19731108	JP 1970-113159	19701218
PRIORITY AFFIN. INFO.:			DE 1969-1963399	A 19691218

PRIORITY APPLM. INFO.:	DE 1969-1963399	A 19691218
IT 32797-22-1*		
RL: SPN (Synthetic preparation); PREP (Preparation)		
(preparation of)		
RN 32797-22-1 CAPLUS		
CN Ammonium, methylbis(3-stearamidopropyl) [2-(sulfoamino)ethyl]-, hydroxide, inner salt (8CI) (CA INDEX NAME)		



=> fil reg
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
25.60	4349.60

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE	TOTAL
ENTRY	SESSION
-3.65	-66.43

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STRUCTURE FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5
DICTIONARY FILE UPDATES: 18 APR 2005 HIGHEST RN 848724-42-5

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

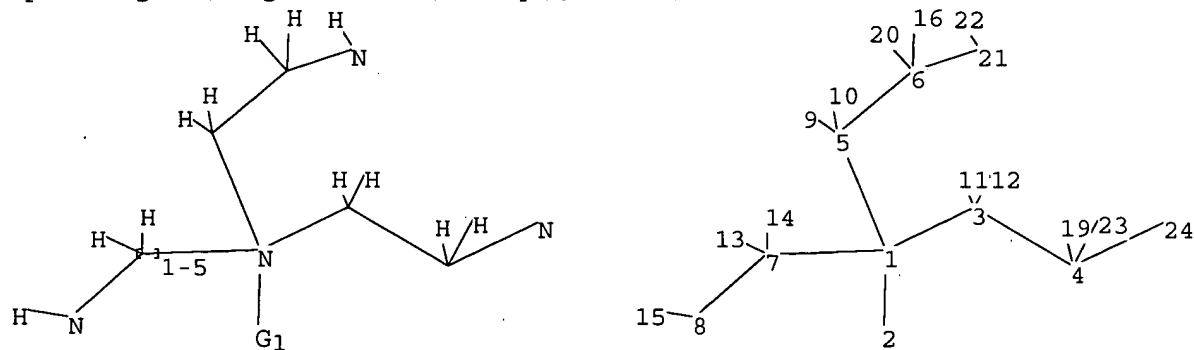
Please note that search-term pricing does apply when
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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

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Uploading C:\Program Files\Stnexp\Queries\10005294.str



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 chain bonds :
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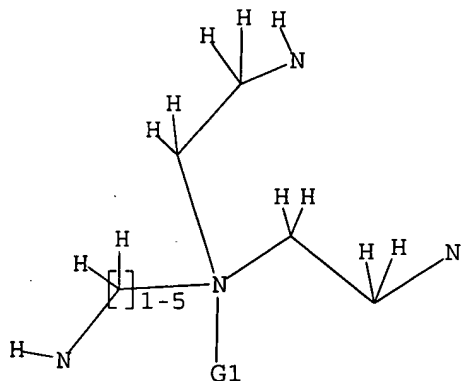
G1:C,H

Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS
 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L88 STRUCTURE UPLOADED

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L88 STR



G1 C,H

Structure attributes must be viewed using STN Express query preparation.

=> s l88

SAMPLE SEARCH INITIATED 18:02:37 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 9011 TO ITERATE

11.1% PROCESSED 1000 ITERATIONS
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
 SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 174531 TO 185909

PROJECTED ANSWERS: 0 TO 0

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FULL SCREEN SEARCH COMPLETED - 177466 TO ITERATE

100.0% PROCESSED 177466 ITERATIONS 18 ANSWERS
SEARCH TIME: 00.00.02

L90 18 SEA SSS FUL L88

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	161.76	4511.36

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-66.43

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FILE COVERS 1907 - 19 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 18 Apr 2005 (20050418/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L91 5 L90

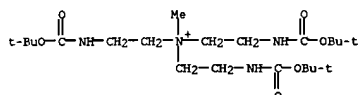
=> d l91 1-5 abs ibib hitstr

L91 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS ON STN

AB The basic idea in this study was to replace the polymeric core of polystyrene-supported dendrimer-like scavenger reagents by a specific functional group of low mol. weight. Using this strategy, very high-loading scavenger reagents were built. The present article describes how new quaternary ammonium-supported quench reagents (TAMA-Cl and BAX-sulfate) for scavenging acids and excess electrophiles from crude reaction mixts. were devised. TAMA-Cl is liquid at room temperature, but is very glutinous and has to be used in aqueous solution. It removes unchanged electrophiles very efficiently. An aqueous preparation of TAMA-Cl may be easily added in automated syntheses, and high-throughput phase-separation techniques should allow purification of scavenger-containing reaction mixts. The application of quaternary ammonium-supported polyamines as scavenger reagents in the preparation of chemical libraries was mentioned (no data). However, workup with TAMA-Cl is more complex than simple filtration. Recognizing this major advantage of solid-phase syntheses, BAX-sulfate was designed, which is a highly crystalline scavenger reagent that allows reaction workup to be simplified to a single filtration and evaporation of solvent. BAX-sulfate reacts with electrophiles, quenches acids and ppts. quant. when di-Et ether is added. It even ppts. from methanol solns. With BAX-sulfate the workup stage uses simple filtration to make crude seps. For example, the reaction of one equivalent chloroacetic anhydride with N-(phenylmethyl)-L-phenylalanine Me ester was found to proceed slowly and generally stopped at 50% conversion. Therefore, the phenylalanine derivative was treated with a three-fold excess of chloroacetic anhydride and allowed to react for 2 h in dichloromethane. The quaternary ammonium reagent BAX sulfate was then added to scavenge the excess anhydride. Addition of di-Et ether ensured the precipitation of the ionic species, which was removed by filtration. This simple work-up gave the product, N-(chloroacetyl)-N-(phenylmethyl)-L-phenylalanine Me ester, in 87% yield and >90% purity. Also, known proportions of p-toluenesulfonic acid (0.2 mmol) and pentamethylbenzene (0.134 mmol) were mixed in deuterated methanol. Then, 0.1 mmol BAX sulfate (0.75 equiv BAX sulfate per equiv of TsOH) was added, followed by addition of di-Et ether and removal of the resulting precipitate by filtration. The p-toluenesulfonic acid had been quant. sequestered by BAX sulfate.

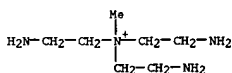
ACCESSION NUMBER: 2004:15626 CAPLUS
DOCUMENT NUMBER: 140:217071
TITLE: Quaternary ammonium-supported scavenger reagents for acids and electrophiles
AUTHOR(S): Ghanem, Nohar; Martinez, Jean; Stien, Didier
CORPORATE SOURCE: LAPF-UMR CNRS 5810, Universites Montpellier 1 and 2, Montpellier, 34095/S, Fr.
SOURCE: European Journal of Organic Chemistry (2004), (1), 84-89
CODEN: EJOCFK; ISSN: 1434-193X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 443649-84-1P, 2-Amino-N,N-bis(2-aminoethyl)-N-methylethanaminium iodide tris(trifluoroacetate)

L91 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
663948-50-3P 663948-51-4P 663948-52-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of quaternary ammonium-supported polyamines as scavenger reagents for acids and electrophiles)
RN 443649-86-3 CAPLUS
CN Ethanaminium, 2-[[[(1,1-dimethylethoxy)carbonyl]amino]-N,N-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-N-methyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

RN 443649-87-4 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, chloride, trihydrochloride (9CI) (CA INDEX NAME)

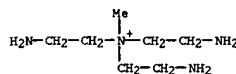


● Cl⁻

● 3 HCl

RN 663948-48-9 CAPLUS
CN Ethanaminium, 2,2'-[1,4-phenylenebis[methylene[(1,1-dimethylethoxy)carbonyl]imino]]bis[N,N-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-N-methyl-, diiodide (9CI) (CA INDEX NAME)

L91 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(TMA-Cl; prepn. of quaternary ammonium-supported polyamines as scavenger reagents for acids and electrophiles)
RN 443649-84-1 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, iodide, tris(trifluoroacetate) (9CI) (CA INDEX NAME)
CM 1
CRN 443649-83-0
CMF C7 H21 N4

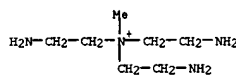


CM 2

CRN 76-05-1
CMF C2 H F3 O2



IT 443649-85-2P, 2-Amino-N,N-bis(2-aminoethyl)-N-methylethanaminium chloride
RL: RCT (Reactant); RGT (Reagent); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of quaternary ammonium-supported polyamines as scavenger reagents for acids and electrophiles)
RN 443649-85-2 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, chloride (9CI) (CA INDEX NAME)

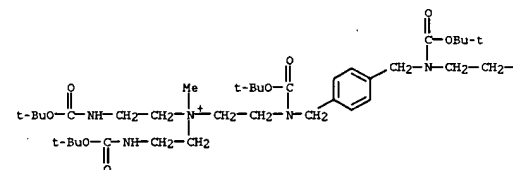


● Cl⁻

IT 443649-86-3P 443649-87-4P, 2-Amino-N,N-bis(2-aminoethyl)-N-methylethanaminium chloride trihydrochloride 663948-48-9P

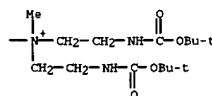
L91 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)

PAGE 1-A



● 2 I⁻

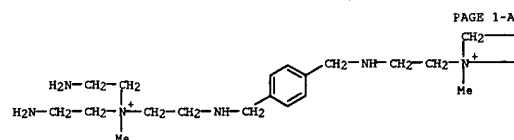
PAGE 1-B



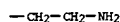
RN 663948-50-3 CAPLUS
CN Ethanaminium, 2,2'-[1,4-phenylenebis(methyleneimino)]bis[N,N-bis(2-aminoethyl)-N-methyl-, diiodide, hexakis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 663948-49-0
CMF C22 H48 N8 . 2 I

● 2 I⁻

PAGE 1-B



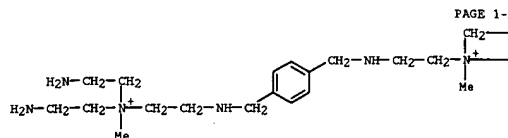
CM 2

CRN 76-05-1

CMF C2 H F3 O2

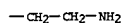


RN 663948-51-4 CAPLUS
CN Ethanaminium, 2,2'-[1,4-phenylenebis(methyleneimino)]bis[N,N-bis(2-aminoethyl)-N-methyl-, dichloride, hexahydrochloride (9CI) (CA INDEX NAME)

● 2 Cl⁻

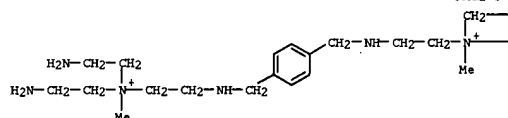
● 6 HCl

PAGE 1-B

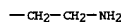


RN 663948-52-5 CAPLUS
CN Ethanaminium, 2,2'-[1,4-phenylenebis(methyleneimino)]bis[N,N-bis(2-aminoethyl)-N-methyl-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A

● 2 Cl⁻

PAGE 1-B



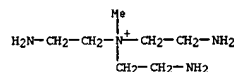
IT 663948-46-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of quaternary ammonium-supported polyamines as scavenger)

reagents for acids and electrophiles)
RN 663948-46-7 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, sulfate (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 443649-83-0

CMF C7 H21 N4



CM 2

CRN 14808-79-8

CMF O4 S



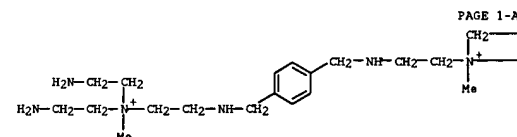
IT 663948-54-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(reaction of amines with anhydrides, isocyanate or tosyl chloride and application of quaternary ammonium-supported polyamines as scavenger reagents for acids and electrophiles)

RN 663948-54-7 CAPLUS
CN Ethanaminium, 2,2'-[1,4-phenylenebis(methyleneimino)]bis[N,N-bis(2-aminoethyl)-N-methyl-, sulfate (1:1) (9CI) (CA INDEX NAME)

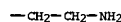
CM 1

CRN 663948-53-6

CMF C22 H48 N8



PAGE 1-B



CM 2

CRN 14808-79-8

CMF O4 S

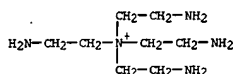


REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L91 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AB A plant protection formulation contains at least one Cu²⁺-containing compound as an active ingredient, characterized in that the active ingredient comprises an amount of at least one chelate of Cu²⁺ with a polyamine compound

ACCESSION NUMBER: 2003:715744 CAPLUS
DOCUMENT NUMBER: 139:241667
TITLE: Plant protection formulation containing a copper-polyamine chelate
INVENTOR(S): Camerlynck, Rudiger; De Potter, Pierre
PATENT ASSIGNEE(S): BMS Micro-Nutrients N. V., Belg.
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

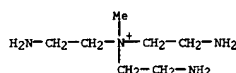
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1342413	A1	20030910	EP 2002-447035	20020308
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, HK, CY, AL, TR				
PRIORITY APPL. INFO.:	EP 2002-447035 20020308			
IT 593254-24-1D	copper chelates			
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)	(plant protection formulation containing)			
RN 593254-24-1	CAPLUS			
CN	Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)- (9CI) (CA INDEX NAME)			



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L91 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AB The synthesis and X-ray crystal structure of the new tren derivative, N,N,N-tris(2-aminoethyl)-N-methylammonium chloride trihydrochloride (I), are detailed. I was prepared by methylation of tris(2-phthalimidoethyl)amine with di-Me sulfate followed by acid deprotection. I crystallizes in the hexagonal space group P6₃ (a 10.625(3), c 7.466(4) Å, V 729.9(5) Å³, Z 2) and the X-ray crystal structure revealed one-dimensional chains of cations extensively hydrogen-bonded to two different types of chloride counter ions, one of which exhibits a coordination number of nine. The cation of I was found to be a poor ligand towards both Co³⁺ and Ni²⁺.

ACCESSION NUMBER: 2002:593551 CAPLUS
DOCUMENT NUMBER: 138:106412
TITLE: Synthesis and structure of the methylated tren derivative N,N,N-tris(2-aminoethyl)-N-methylammonium chloride trihydrochloride
AUTHOR(S): Blackman, Allan G.
CORPORATE SOURCE: Department of Chemistry, University of Otago, Dunedin, N. Z.
SOURCE: Australian Journal of Chemistry (2002), 55(4), 263-266
CODEN: AJCHAS; ISSN: 0004-9425
PUBLISHER: CSIRO Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:106412
IT 443649-87-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and crystal structure of N,N,N-tris(2-aminoethyl)-N-methylammonium chloride trihydrochloride)
RN 443649-87-4 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, chloride, trihydrochloride (9CI) (CA INDEX NAME)



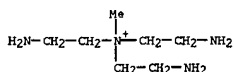
● Cl⁻

● 3 HCl

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L91 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AB A new quaternary ammonium salt bearing three amino functionalities can be used to remove electrophiles. In most cases, final products were essentially pure after treatment of the crude reaction mixture with this new scavenger reagent.

ACCESSION NUMBER: 2002:136819 CAPLUS
DOCUMENT NUMBER: 137:108877
TITLE: A new high-loading water-soluble scavenger for anhydrides, acid chlorides and isocyanates
AUTHOR(S): Ghanem, Nohay Martinez, Jean Stien, Didier
CORPORATE SOURCE: LAPP-UMR5810, Université de Montpellier 2, Montpellier, 34095, Fr.
SOURCE: Tetrahedron Letters (2002), 43(9), 1693-1695
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:108877
IT 443649-84-1P 443649-85-2P 443649-86-3P 443649-87-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(removal of electrophiles by water-soluble ammonium salt scavenger for anhydrides, acid chlorides and isocyanates)
RN 443649-84-1 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, iodide, tris(trifluoroacetate) (9CI) (CA INDEX NAME)
CM 1
CRN 443649-83-0
CMF C7 H21 N4



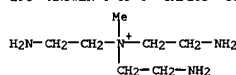
CM 2

CRN 76-05-1
CMF C2 H F3 O2



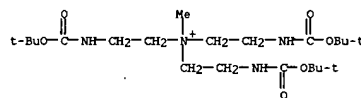
RN 443649-85-2 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, chloride (9CI) (CA INDEX NAME)

L91 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



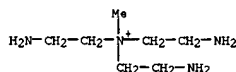
● Cl⁻

RN 443649-86-3 CAPLUS
CN Ethanaminium, 2-[[[(1,1-dimethylethoxy)carbonyl]amino]-N,N-bis[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-N-methyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

RN 443649-87-4 CAPLUS
CN Ethanaminium, 2-amino-N,N-bis(2-aminoethyl)-N-methyl-, chloride, trihydrochloride (9CI) (CA INDEX NAME)



● Cl⁻

● 3 HCl

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L91 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
 AB A mixture containing natural rubber latexes and the amphoteric bactericides
 $R_1R_2HCH_2CO_2H$ ($R_1 = R(NHCH_2CH_2)_n$; $R_2 = RNHCH_2CH_2$, H; $R = C_8-18$ alkyl; $n =$
 1-3) is made into a slow-release bactericide-containing surgical material by
 the immersion molding method. As an example, a composition containing 60%
 acidic natural rubber latex solution (pH 2.8) 100, zinc dimethyldithiocarbamate

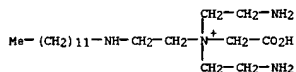
0.4, S 1, ZnO 2.5, and stearic acid 1 part was mixed with 6 parts
 dodecylidi(aminoethyl)glycine-HCl, 4 parts tetradecylidi(aminoethyl)glycine-
 HCl, and 10 parts 10% alkylpolyaminoethyl glycine in H₂O, and made into a
 catheter for urinary catheterization by the immersion molding method. The
 catheter was bacteria-resistant.

ACCESSION NUMBER: 1986:597229 CAPLUS
 DOCUMENT NUMBER: 105:197229
 TITLE: Manufacture of surgical goods containing slow-release
 antimicrobial agents
 INVENTOR(S): Mochizuki, Masatsugu; Umemura, Yoshihiro; Ozaki,
 Yasuhiko
 PATENT ASSIGNEE(S): Unitika Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXKAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61146265	A2	19860703	JP 1984-269132	19841219
JP 04034414	B4	19920605		

PRIORITY APPL. INFO.: JP 1984-269132 19841219
 IT 105210-67-1

RL: BIOL (Biological study)
 (urinary catheters preparation from compns. containing natural rubber
 latexes
 and)
 RN 105210-67-1 CAPLUS
 CN Ethanaminium, N,N-bis-(2-aminoethyl)-N-(carboxymethyl)-2-(dodecylamino)-,
 chloride (9CI) (CA INDEX NAME)



● Cl⁻

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

25.60

4536.96

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-3.65

-70.08

STN INTERNATIONAL LOGOFF AT 18:04:05 ON 19 APR 2005